```
July 3, 2003, 02:31:01 ; Search time 4275.04 Seconds (without alignments) 11062.367 Million cell updates/sec
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                               OM nucleic - nucleic search, using sw model
```

US-10-004-219B-2 1625 1 gctttccagtctggtggtga......ctgcaataaaatcagcagtc 1625 Title: Perfect score: Sequence:

IDENTITY_NUC Gapox 1.0 Scoring table:

2054640 seqs, 14551402878 residues Searched:

4109280 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

GenEmbl:* Database :

9b_ph:* 9b_pl:* 9b_pr:* 9b_ro:* 9b_st:* 9b_st:* 9b_vi:* em_fun:* em_hum:* gb_ba:* gb_htg:* gb_in:* gb_om:* gb_ov:* gb_pat:* em_ba:* em_in:* em_mu:* em_om:* em_ov:*

em_htg_mam:*
em_htg_vrt:*
em_sy:*
em_htgo_hum:*
em_htgo_num:*
em_htgo_other:* em_vi:*
em_htg_hum:*
em_htg_inv:*
em_htg_inv:*
em_htg_nus:*
em_htg_pln:* em_pat:*
em_ph:*
em_pl:*
em_ro:* em_un:*

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	90004 Homo sa	05989 Sednen	025008 Homo	HOMOS CA	034548 Mus	14 Mus mus	1 Mus mus	3 Mus m	в ошон (584 Mus mu	757 Mus muscu	S Mus mus	<u> </u>	0 (AKZIZISS SEGUENCE AX108752 Seguence	tuman chi	Sequence	AR206041 Sequence	_	$\overline{}$	Sedneuc	10mo	900 Mus musc	5054 Bufo ja	5165 Homo sa	2834 Sequ		Human IKL-			550 Macaca r	12835 Sequenc	50 Human	3 Papio	32137 Mous	υ Q	5048 Mesocric	18 Hams	501 CDNA	Human gl	56387 Human D	7	
	ΩI	0006	0598	02500	36	103454	113	F1545	F29000		~	2	AY049765		46200042	AK212139 AX108752	HSD29615	AR172107	AR206041	AR212138	AX108750	AR172108		29	Š	9	~ -	HSU58514	~	9 1	2.5	55	AR042835	S	BABEDOSG	MUSOGP		MAU15048	HAMOGE	E01501	HA3G	AL356387	-	
	Length DB	1625	369	354	570	557	538 1	526	530 1	188 9	525 1	506	502	T 607		מע	233	643	636	989	989	713	710 9	994	262	200	6.0	434	8 4	# C	23.2	406		198	228	S	504 6	353 1	387	149	17	569	034	
ρ	Query Match L	100.	77.9		-	. 79					٠:	-:	42.4	: -			20.00		т.	29.6	٦.	٦.	٠.	28.1		٠. ١	٠. ٠			27.0		22.0		٠.	21.8	٠.	٠.		21.5			21.4	21.4	
	Score	162	266.	٠.	. 6	045	042.	_;	041.	037.	_;	۲.	٠.	٠.	00	404	•	81.	48	œ	4	77.	ė.	457	42	٠,	οι	รูเ	•	70	οū	56.	354.8	54.	54.	52.	20.	Š	35	49.	•	₹ .	 48	
	Result No.		7	m •	4- ռ	n ve	7	80	σ	10	11	12	E	4.4	7 -	170	18	13	20	21	22	23	24	25	26	27	78	62.0	ر د د	33	33	34	35	36	37	38	39	40	41	42	43	44	45	

ALIGNMENTS

AF290004 1625 bp mRNA 11near PRI 27-FEB-2001 Homo sapiens acidic mammallan chitinase precursor, mRNA, complete AF290004 AF290004.1 GI:12597292 RESULT 1 AF290004 LOCUS DEFINITION KEYWORDS SOURCE ORGANISM ACCESSION VERSION

Homo sapiens.
Homo sapiens
Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Bukaryota; Metazoa; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1625)
Boot, R.G., Blommaart, E.F., Swart, E., Ghauharali-van der Vlugt, K.,
Bijl, N., Moe, C., Place, A. and Aerts, J.M. REFERENCE AUTHORS

```
421
                                         481
                                                                                541
                                                                                                                                              199
                                                                                                                                                                                     721
                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                        1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1501
                    481
                                                             541
                                                                                                     601
                                                                                                                         601
                                                                                                                                                                 661
                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                          g
                    à
                                       a
                                                                              qq
                                                                                                                        a
                                                                                                                                                              g
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                 QΩ
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                   엄
                                                                                                                                                                                                                                                                                                                                                                                                                                      δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dp
                                                            ŏ
                                                                                                     δ
                                                                                                                                             ò
                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                             δý
                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٠ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΫ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                     /product="acidic mammalian chitinase precursor"
/protein_id="aAG60019.1"
/db_xref="di:12597293"
/db_xref="di:12597293"
/translation="wrKililirglvliliniQlGSAYQLTCYFTNWAQYRPGLGRFMPD
NIDPCLCTHLIYAFAGRQNNBITTIEWNDYTLYQAFNGLKNKNSQLKTLLAIGGWNFG
PRPFTWAYSTBENRQYFITSYTKFLRYOFSPGESGSPEDPOKHLEYLVV
EMREAFEQERKQINIRFLWYWAAVAAGISNIQSGYEIPQLSQYLDYTHVWYYDLHGSN
EGYTGENSPLYKYPTDTGSNAYLNVDYVWNYWKDNGAPAEKLIVGFPTYGHNFILSNP
                                                                                                                                                                                                                                                                                                                       SNTGIGAPTSGAGPAGPYAKESGIWAYYEICTFLKNGATQGWDAPQEVPYAYQGWWWY
SYDAKASDIKAQWIKHNKGGAMWWAIDLDDPTGTFCNQGKPPLISTLKKALGIQSA
SCTAPAQPIEDITAAPSGSGNGSGSSSGGSSGGGSGFCAVRANGLYPVANNRNAFWHC
VNGVTYQQNCQAGLVFDTSCDCCNWA"
                                                                                                                                                                                                                                                                                                                                                                                                                               ó
 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGACAACAACGAGAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAATAA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                               Biochemistry, Academic Medical
Meibergdreef 15, Amsterdam 1105
                                                                                                                                                                         /EC_number="3.2.1.14"
/note="chitinase precursor; AMCase; chitinase activity demonstrated by expression in COS cells; similar to sequences presented in GenBank Accession Numbers AB0250 and AB025009"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAACATATAAAAAGCTCTGCGGGACTGGTGCTGCAACCATGACAAAGCTTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTTCCAGTCTGGTGGAATCCTCCATAGTCTGAAGCCTTTGTGATAACCACAGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTT
identification of a novel acidic mammalian chitinase distinct
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
               March, 200
                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                         Length 1625;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                             Aerts, J.M.
                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                          6
                   6770-6778 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                    /tissue_type="stomach; lung"
104. .1534
                                                                                                                                                                                                                                                                                                                                                                                                        Score 1625; 1
Pred. No. 0;
); Mismatches
                                                             and
                                                                                                                                                                                                                                                                                                                                                                            371
                                                                                                             Location/Qualiflers
1. .1625
/organism="Homo sapiens"
/db_xref="taxon:9606"
                                               2 (bases 1 to 1625)
Boot, R.G., Verhock, M., Swart, E. a
Burect Submission
Submitted (26-JUL-2000) Dept. of
Center, University of Amsterdam,
                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                    (6)
                                                                                                                                                                                                                                                                                                                                                                                                         100.08;
                                                                                                     The Netherlands
                J. Biol. Chem. 276
21125893
                                                                                                                                                                                                                                                                                                                                                                  . .166
468 c
                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.
Best Local Similarity 100.
Matches 1625, Conservative
          chitotriosidase
                                                                                                                                                                                                                                                                                                                                                                            ø
                                         11085997
                                                                                                                                                                                                                                                                                                                                                                            387
                                                                                                                                                                                                                                                                                                                                                              sig_peptide
BASE COUNT ' 3
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                         source
                  JOURNAL
MEDLINE
PUBMED
                                                REFERENCE
AUTHORS
TITLE
                                                                                JOURNAL
                                                                                                                                                          cos.
                                                                                                              FEATURES
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
```

```
1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1260
                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGACCTGGTCTATATTCCCTAGA 1560
480
                       540
                                              540
                                                                       900
                                                                                              900
                                                                                                                       999
                                                                                                                                              9
                                                                                                                                                                       720
                                                                                                                                                                                             720
                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                       840
                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                 096
CACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATATT
                       TGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTA
                                                                                                                                                                                     TGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGC
                                                                                                                                     CCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGT
                                                                                                                                                                                                                                                                                     CTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                  CTATGGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTGCTGGTCCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1141 TCAATGGCTTAAGCACAAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTGGATTCTGTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTICTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTT
```

```
1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1428
                                                                                                                                                                                                                                                                                                                    1128
                                                                                                                                                                                                                                                                                                                                                                                                                                 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1037
                                                                                                                                                                                                         1008
                                                                                                                                                                                                                                                               1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-NOV-2001
COMplete
                                                                    557
                                                                                              888
                                                                                                                         617
                                                                                                                                                    948
                                                                                                                                                                              677
                                                                                                                                                                                                                                    737
                                                                                                                                                                                                                                                                                         797
                                                                                                                                                                                                                                                                                                                                              857
                                                                                                                                                                                                                                                                                                                                                                                                    917
                                                                                                                                                                                                                                                                                                                                                                                                                                                           977
               497
 498 TGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAA
                                                                                                               TGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGG
                                                                                                                                                                                                           TGCCCCCACCTCTGGTGCTGGTCCTGGTCCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGC
                                                                                                                                                                                                                      TTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGCCCCTCA
                                                                                                                                                                                                                                                                              GGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1098 CAGCTCGGGAGGCÁGTGGATTCTGTGCTGCAGAGCCAACGCCTCTACCCCCGTGGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGACCTGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTCATCGT
                                                                                                                                                                                                                                                                                                                                   TGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           • 918 TGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGCCTCCAGCTCAGCCCATTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1218 CGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGACCTGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1549 ATATTCCTAGAGTTCCAGTCTTTTGCTTAGGACATGTTGCCCCTAAAGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                              1529 bp mRNA linear MAM for chitin binding protein b04,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  taurus liver cDNA to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAATAAAATCAGCAGTC 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DO4 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:16754894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cpb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AB051629
AB051629.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AB051629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1429
                                                                                                                                                                                                                                                                                                                      1069
                                                                                                                                                                                                                                                                                                                                                                           1129
                                                                                                                                                                                                                                                                                                                                                                                                    828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1489
               438
                                                                                                                          558
                                                                                                                                                      889
                                                                                                                                                                                                         949
                                                                                                                                                                                                                                    678
                                                                                                                                                                                                                                                               1009
                                                                                                                                                                                                                                                                                         738
                                                                                                                                                                                                                                                                                                                                                                                                                                 1189
                                          694
                                                                                               829
                                                                                                                                                                              618
                                                                                                                                                                                                                                                                                                                                               798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
AB051629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                   ð
                                          ò
                                                                   g
                                                                                               ò
                                                                                                                      q
                                                                                                                                                      à
                                                                                                                                                                              g
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                              /translation="WYSTPENRQTFITSVIKFLRQYEFDGLDFDWEYPGSRGSPPQDK
HLFYVLVQBENEAFFDGRAKOINRPRLAVTAAVAAGISNIOSGYEIPQLSQYLDYIHVM
TYDLHGSWEGYTGENSPLYKYPTDTGSNAYLNVDYVMNYWRDNGAPAEKLIVGFPTYG
HNFILSNPSWYGGAPAGAGPAGPAGAPAGAPYGAGPYKESGTWAYYETCTFLKNGATOGWDAPOEVPY
AYGGNVWYGYDNYKSFDIKAQWLKHNKFGGAMVWAIDLDDFTGTFCNQGKFPLISTLK
NRNAFWHCVNGYTYQDRCDAFTAAPSGSGNGSGSSSGGSGGCAGRANGLYPAN
NRNAFWHCVNGYTYQDTGAPTAAPSGCGNGSGSSGGGGGCAGRANGLYPAN
387 c 348 g 308 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             528
                                                                                                                                                                                        Submitted (16-MAR-1999) Akihiko Saito, Otsuka Pharmaceutical Co., Lid., Otsuka GBN Research Institute; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima, 771-0192, Japan (E-mail:saito@otsuka.gr.jp, Tel:81-88-665-2888, Fax:81-88-637-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77
                                          Euteleostomi;
Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACGAACAGGTGGCCCGACTCTGGAGCCCAGGCTGTTGCTTTCCAGTCTGGTGGTGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTCATCAAATTCCTGCGCCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGGAGTACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGGCTATGAGATCCCCCAACTGTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGAAAAATAAGAACAGCCAGCTGAAAACTCCTGGCCATTGGAGGCTGGAACTTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                         l (sites)
Salto, A., Ozaki, K., Fujiwara, T., Nakamura, Y. and Tanigami, A.
Isolation and mapping of a human lung-specific gene, TSA1902, encoding a novel chitinase family member
239 (2), 325-331 (1999)
                                                                                                                                                2 (bases 1 to 1354)
Saito, A., Ozaki, K., Fujiwara, T., Takahashi, E. and Tanigami, A.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1354;
                                         Craniata; Vertebrata; E
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                        /product-"novel member of chitinase family"
/protein_id-"BAA86980.1"
/db_xref-"GI:6467177"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
novel member of chitinase family; TSA1902-L. Homo sapiens cDNA to mRNA. Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 1260.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                           Homo sapiens
Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Primates;
                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 157. .1263
/gene-"TSA1902-L"
                                                                                                                                                                                                                                                                                                                    gene-"TSA1902-L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     77.68;
96.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 96.4
Matches 1289; Conservative
                                                                                                                                                                                                                                                                                                      .1354
                                                                                                                                                                                                                                                             1, .1354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          649
                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                      JOURNAL
MEDLINE
REFERENCE
 KEYWORDS
SOURCE
                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                FEATURES
```

õ 셤 ò g δ a οy g ò g ò 8 ò g S

```
1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGACCTG-GTCTATATTCCCTAGAGTTCCAGTCTTTTGCTTAGGACATGTTGCCC 1594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGATGCAAGTTGCACGGCTCCAG 1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTA 1355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1252
                                                                                                                                                                                                                                                                                                                                                                995
                                                                                                                                                                  755
                                                                                                                                                                                                                  815
                                                                                                                                                                                                                                                                875
                                                                                                                                                                                                                                                                                                                935
                                                                                                                                                                                                                                                                                                                                                                                                                                     964
                       575
                                                                      635
                                                                                            544
                                                                                                                    695
                                                                                                                                            604
                                                                                                                                                                                          664
                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                        784
                                                                                                                                                                                                                                                                                                                                       844
                                                                                                                                                                                                                                                                                                                                                                                      904
424
                                             484
                                                                                                                                                                                                                                                                                                                                                                                                              ACCCGTGGCAAATAACAGAAATGCCTTCTGGCACGCGGGGAATGGAGTCACGTACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTCATTTCTTCAGTCATCAAATTCCTACAGTATGGATTTGACGGGCTGGATTTTG
                       TGATGGTCACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCC
                                                                                                                                  CCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCT
                                                                                                                                                                                           CCCAGCTATCCCAGTACCTGGACTTCATCCATGTCATGACCTATGACTTCCATGGCTCCT
                                                                                                                                                                                                                   GGGAGGGCTACACTGGAGAGACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCA
                                                                                                                                                                                                                               ACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTG
                                                                                                                                                                                                                                                                              ATACTTACCTCAATGTGGAATACGCCATGAACTACTGGAAGAAAAATGGGGCCCCGGCTG
                                                                                                                                                                                                                                                                                                                AGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCTCCA
                                                                                                                                                                                                                                                                                                                              ACACTGGAATTGGTGCCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCCTATGCCAAGGAGT
                                                                                                                                                                                                                                                                                                                                                                             GGGATGCCCCTCAGGAGTGCCTTATGCCTATCAGGCAATGTGTGGGTTGGCTATGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGATGACTCTCAGAATGTGCCCTATGCCTACAAGGGCACTGAGTGGGTTATGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u> ACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAATTTGGAGGCGCCA</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAACTGCCAGGCCGGGCTTGTCTTCGACACCGGCTGTGATTGCTGCAACTGGGCATAAA
                                                                       TGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGGAGATCAACAAGCCCAGGC
                                                                                                                                            545
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1433
                                               425
                                                                                                                                                                                                                                          999
                                                                                                                                                                                                                                                                  816
                                                                                                                                                                                                                                                                                         725
                                                                                                                                                                                                                                                                                                                 876
                                                                                                                                                                                                                                                                                                                                        785
                                                                                                                                                                                                                                                                                                                                                                 936
                                                                                                                                                                                                                                                                                                                                                                                       845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1536
 365
                       516
                                                                       576
                                                                                                                                                                                          605
                                                                                                                                                                                                                  756
                                                                                                                                                                                                                                                                                                                                                                                                               966
                                                                                                                                                                                                                                                                                                                                                                                                                                      905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1116
                                                                                                                    989
                                                                                                                                                                    969
                       à
                                             g
                                                                                       g
g
                                                                                                                    ŏ
                                                                                                                                            g
                                                                                                                                                                  ò
                                                                                                                                                                                         g
                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    · δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g 6
                                                                   ò
                                                                                                                                                                                                                                                                                                                                                 /translatio-"Maklifledeafilmaquesayquvcyfsnwaqyrpedlgsfrpd

NIDPCLCHLIYAFAGMSNBITTIENBWDALFSSRNDLKRRSQLKILATGGWNFG

NIDPCLCHLIYAFAGMSNBITTIENBWDALFSSRNDLKRRSQLKILATGGWNFG

PTREAFEQEAKQTNKPPILSYSIKFLHQYGFDFDCLDFDWSYPGFRGSPQDKHLFTVLVO

BTREAFEQEAKQTNKPPLLYPAAVAAGISNIQAGYEIPQLSQYLDFIHWTYDFHGSW

SNUGTGRAPLYKYPTDGATATANYWKNGAPEKLIIGFPAKGHNFILRDA

SNUGTGAPTSGAGPAPTFRAGFWAYYEICAFLKDGATEAMDSQNVPYAYKGTEWY

QYDNVNSFRIKAQWLKENNFGGAMYWAIDLDDFTGFFCNQFRPINTLKDALGLKSA

TYKQNCLTGIVFDTSCHCCNWA"
                                                                                                                                              Department
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTCATCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAGGTTCTGCCTACCAGCTGGTATGCTACTTCTCTAACTGGGCCCAGTACCGTCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCTTTCAATGGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGC
                                                                                                                                         Submitted (23-NOV-2000) Masako Suzuki, Iwate University, Depar of Veterinary Medicine, Faculty of Agriculture; Ueda 3-18-8, Morioka, Iwate 020-8550, Japan (E-mail:u9998001@iwate-u.ac.jp, Tel:81-19-621-6212)
                                                        Suzuki,M., Morimatsu,M., Yamashita,T., Iwanaga,T. and Syuto,B.
A novel serum chitinase that is expressed in bovine liver
FEBS_Lett. 506 (2), 127-130 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4; Length 1529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                               protein b04'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; DB 4;
3e-283;
ss 238;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1095.2;
Pred. No. 1.3e-
0; Mismatches
                                                                                                     2 (bases 1 to 1529)
Suzuki,M., Morimatsu,M. and Syuto,B.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     368
                                                                                                                                                                                                                                                                                                   /codon_start=1
/product="chitin binding
/protein_id="BAB71805.1"
/db_xref="GI:16754895"
                                                                                                                                                                                                    1. 1529
/organism="Bos taurus"
/db_xref="taxon:9913"
/tissue_type="liver"
1. 1529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                                                                                                                                                                               /gene="cbp b04"
13. .1431
/gene="cbp b04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="cbp b04"
405 c · 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.4%;
ilarity 83.5%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                            21475601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    391
                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Sim
Matches 1271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNT
ORGANISM
                                                                    TITLE
JOURNAL
MEDLINE
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                    gene
                                               REFERENCE
                                                       AUTHORS
                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                            Sao
                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
```

요 à

```
3783
                                                                                                                                                                                                                                                                                                        3663
                                                                                                                                                                                                                                                                                                                                                1103
                                                                                                                                                                                                                                                                                                                                                                                      3723
                                                                                                                                                                                                                                                                                                                                                                                                                            1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1403
                                                                                                                                 AGGGCAAGTTTCCCCTAATCTCCACCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3904 GCACGGCTCCAGCTCCAGCCCATTGAGCCAATAACTGCTCCCAGTGGCAGCGGGAACG 3963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1557 bp mRNA linear ROD 07-AUG-2002 chitlnase, acidic, clone MGC:19045 IMAGE:4189080,
3364 TCCATGGCTCCTGGGAGGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTG 3423
                                                                                                                                                                                                                               3544 GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGGCCCT 3603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAACGCCTCTACCCCGTGGCAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGGGCATAAACCTGACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTTTGCTTAGGA 1583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4144 ACTGGGGATAAAACCTGACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTTTGCTTAGGA 4203
                                                                                                                                                                                           983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 1557)
                                                                                                                                                                                                                                                                                       3664 CCACTCAGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGGG
                                   ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                         3424 ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                               GCAACCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGCTGGCCCTT
                                                                                                                                                                                                                                                                       ATGCCAAGGAGTCTGGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAG
                                                                                                                                                                                                                                                                                                                                              1044 CCACTCAGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                            3724 TIGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4084 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                            TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3844 AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTTGCAGAGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4024 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:21961190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA, complete cds. BC034548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BC034548
Mus musculus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BC034548.1
                                   804
                                                                                                                                                                                                                                                                                                                                                                                                                          1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1524
                                                                                                               864
                                                                                                                                                                                           924
                                                                                                                                                                                                                                                                     984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BC034548
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
                                   ò
                                                                       셤
                                                                                                               à
                                                                                                                                               g
                                                                                                                                                                                           ö
                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA ilbrary construction and 5'-end one pass sequencing: Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; 3'-end one pass sequencing: RAB; clone selection for full insert sequencing: RAB and Helix Research Institute.
                                                                                                                                                 ar PRI 15-JUL-2002
highly similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (08-JUL-2002) Sumlo Sugano, Institute of Medical Science, University of Tokyo, Laboratory of Genome Structure, Human Genome Center; Shirokane-dai, 4-6-1, Minato-ku, Tokyo 108-8639, Japan (E-mail:cdnaidims.u-tokyo.ac.jp, Tel:81-3-5449-5286,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      623
                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                            Ninomiya,K., Wagatsuma,M., Kanda,K., Kondo,H., Yokoi,T.,
Kodaira,H., Furuya,T., Takahashi,M., Kikkawa,E., Omura,Y., Abe,K
Ramihara,K., Katsuta,N., Sato,K., Tanikawa,M., Yamazaki,M.,
Suzuki,Y., Hata,H., Nakagawa,K., Mizuno,S., Morinaga,M.,
Kawamura,M., Sugiyama,T., Irie,R., Octsuki,T., Sato,H.,
Nishikawa,T., Sugiyama,A., Kawakami,B., Nagai,K., Isogai,T. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  564 ICTICACTGTCCTGGTGCAGGAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624 ACAAGCCCAGGCTGATGGTCACTGCTGCAGTGCTGCTGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3244 ACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCATGGCTCCTGGGAGGCTACACTGGAGAACAGCCCCCTCTACAATACCCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                   AK098814.1 GI:21758941
oligo capping; fis (full insert sequence).
Homo sapiens stomach mucosa cDNA to mRNA, clone_lib:STM
clone:STM04207.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 4250;
                                                                                                                                                   AKO98814 4250 bp mRNA linear
Homo sapiens cDNA FLJ25948 fis, clone STM04207, hi
Homo sapiens acidic mammalian chitinase precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="stomach mucosa"
/clone_lib="STM"
/note="cloning vector: pME18SFL3"
868 c 966 g 1154 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.4%; Score 1046; DB 9;
llarity 99.1%; Pred. No. 2.5e-270;
Conservative 0; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sugano, S.
NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                 4250 bp
           /clone="STM04207"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 (bases I to 4250)
Sugano, S. and Suzuki, Y.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .4250
                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 1052; Conserv
                                                                                                                                                                                                           AK098814
AK098814.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ø
                                                                                                                                             AK098814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                           RESULT 5
AK098814
                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
```

à 8 ò 셤 ò g à

341 TTCAATGGCCTGAAAAAAAAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGG 400 	AACTTCGGGACTGCCCTTTCACTGCCATGTTTTCTACTCCTGAGAACCGCCAGACTTTC 46	481 AAGGAAATGCGTGAAGCTTTTGAGCAGGCTATTGAGAGCAACAGGCCCAGATGATG 540 641 GTCACTGCTGCAGTAGCTGGCATCTCCAATATCAGACCACAGGCCCAGATTGATG 540 641 GTACTGCTGCAGTAGCTGGCATCTCCAATATCCAACATCTGGCTATCAGATCCCTGA 700 701 CTGTCACAGTACCTGGACTACCATGTCATGACCTACGCTGCTATCAGATCCCTGGAG 760 11	TACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTCAGAAG 880 1111111111111111111111111111111111	112 102 118 108	1181 TGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTA 1240	1301 CCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGGGGGG
δ. ·				Oy Oy Oy	. Oy Oy Oy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
A E	NIH-MGC Project URL: http://mgc.nci.nih.gov USA MMENT Contact: MGC help desk Emall: cgapbs-remail.nih.gov Tissue Procurement: Jeffrey E. Green, M.D. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Baylor College of Medicine Human Genome Sequencing Center Center code: BCM-HGSC Web site: http://www.hgsc.bcm.tmc.edu/cdna/ Contexct: amgében.tnc.edu Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M., Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D.M., Richards, S., Gibbs, R.A.	Clone dis through t Series: I This clon passed th identity rce	/clone_lib="NOI_CGAP_SG2" /lab_host="biloB" /note="Vector: pCWV-SPORT6" 4. 1425 /codn_start=1 /product="chitinase, acidic" /product="chitinase, acidic" /protein_id="AAH34548.1" /db_xref="locus1D:81600" /translation="MAKLLLVTGLALLINAQLGSAYNLICYFTNWAQYRPGLGSFKPD DINPCLCTHLIATAFAGNONREITTIEWNDVTLXRFNDLKNRNSKLKTLATGGWNFG TAPFTTWYSTSQNRQTFITSVITATENGNDVTLXRFNDLKNRNSKLKTLATGGWNFG TAPFTTWYSTSQNRQTFITSVITATENGNDVTLXRFNDLKNRNSKLKTLATGGWNFG TAPFTTWYSTSQNRQTFITSVITATSVITATGGGSANFG TAPFTTWYSTSQNRQTFITSVITATGGGSANTWNTWNRNGAPAEKLIVGFPEGTFFILRNP SDNGIGAPPSGGGPARGAGFYRRQAGFAXYELTELRSP SDNGIGAPPSGGGPARGAGFYRRQAGFAXYELTELRSP SDNGIGAPPSGGGPARGAGFYRRQAGFAXYENTELLSRP GYDNIKSFSVKAQWIKQNNFGGAMIWAIDLDDFTGSFCDGGKFPLTSTLNRP	DUNT 410 a Y Match Local Similari hes 1202; Cons	TACTGAATTTGCAGGTCGGC	28 18 34 24
TITLE JOURN	REMAR COMMENT	FEATURES		BASE CO ORIGIN Quer Best Matcl	6	6 6 6

1198; Conservative 0; Mismatches 228; Indels 9; Gaps 1; 106 GACAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGC 165	361 CTCAGTCATCAATTTTCTGCGTCAGTATGGTTTTTTTTTT	TARGETACTOR TO THE TOTAL	901 GGCCTACTATGAGATTIGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTC 960 1066 TCAGGAAGTGCCTATGCCTATCAGGGCAATGTGGGTTGGCTATGACAACATCAAGAG 1125
ма	4 5 4 5 4 5 6 5	4 6 6 6 6 6 6	o da da
1421 GTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAAC 1480	NIH-MGC Project URL: http://mgc.nci.nih.gov Contact: MGC help desk Emailnih.gov Tissue procurement: Jeffrey E. Green, M.D. CDNA Library Preparation: Life Technologies, Inc. CONA Sequencing Dy: Baylor College of Medicine Human Genome Sequencing Center Center code: BCM-HGSC Web site: http://www.hgsc.bcm.tmc.edu/cdna/ Contact: amg@bcm.tmc.edu Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M. Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D. Richards, S., Gibbs, R.A.	through the I.M.A.G.E. Consortium/Linit at: http://image.llnl.gov Series: IRAK plate: 24 Row: e Column: 11. Location/Qualifiers 11538 /organism="Mus musculus" /db_xere="taxon:10090" /map="FVB_NW" /clone="MGC:18771 IMAGE:4165150" //tissue_tYpe="salivary gland, 10 week old female mouse" /clone="MGC:18771 IMAGE:4165150" //tissue_tYpe="salivary gland, 10 week old female mouse" /clone="MGC:18771 IMAGE:4165150" //tissue_tYpe="salivary gland, 10 week old female mouse" /clone="MGC:18771 IMAGE:4165150" //lab_host="DH10B" /clone=lib="MCI_GAP_SG2" /lab_host="Vector: pCMV-SPORT6" 3231420 /codon_start=1 /protein_id="MAH11134.1" /db_xref="GI:1502982" //translation="MAH11134.1" /db_xref="GI:1502982" //translation="MASTSONROFFITSVIKFLROYGFDGIDLDWEYPGSRGSPPOD HLFTVLVKEREAFEOEALESNRPRLMYTAAVAGGISNIOAGYEIPELSKYLDFING TYDLHGSWEGYTGENGPLYKYPTETGSNATUNVDYYMNYKNNGAPAEKLIYGFPER	393 e rtch
OY 1 Db 1 OY 1 Db 1 Db 1 ESULT 7 BC011134 LOCUS DEFINITION ACCESSION VERGION V	REMARK COMMENT	FEATURES	BASE COUNT ORIGIN QUETY MA Best LOC

셤

à

g ò 용

ò

원 à 셤 ò 8

à

```
ä
                                                                                                                                                                                                                                                                                                                                                                     167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                          227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62 ACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCCAGGTCTGGGGAGCTTCA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                               CCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCAGCTGACATGCTACTTCACCCAACTGGGCCCAGTACCGGCCAGGCCTGGGGGCGCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302 GAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422 CAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTTCACTGTCCTGGTGAAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCAGGCTGATGGTCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          648 CTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  708 AGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      828 ATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIGGATICCCTACCTAIGGACACAACTICAICCIGAGCAACCCCTCCAACACTGGAATIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                     CAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                        10; Length 1526;
                                                                                                                                                                                                                                                                                                                        <u>ن</u>
                                                                                                                 conserved region; active site"
                                                                                                                                                                                 invariant Glu; active site"
g 398 t
                                                                                                                                                                                                                                                                        Score 1041.8; DB 10; Lengt
Pred. No. 3.2e-269;
0; Mismatches 227; Indels
                                     /product-"putative chitinase" 394. 417 /gene-"YNL"
                                                                                                                                                                                                                                                                                                                                                                                          /note="putative consolation of the consolation of t
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 83.5%;
Matches 1197; Conservative
  6Í. .1416
/gene="YNL"
                                                                                                                                                                                                           ď
                                                                                                                                                                                                        383
                                                                      misc_feature
                                                                                                                                         misc_feature
    nat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          782
                                                                                                                                                                                                                                                                                                                                                                     108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         528
                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            å
                                                                                                                                                                                                                                                                           1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APFŢTMVSTSQNRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPODKHLFTVLVKE
MREAFEQEAIESNRPRLMVTAAVAGGISNIQAGYEIPELSKYLDFIHVMŢYDLHGSWE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GYTGENSPLYKYPTETGSNAYLNVDYVMNYMKNNGAPAEKLIVGFPEYGHTFILRNPS
DNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEVWDASQEVPYAYKANEWLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YDNIKSFSVKAQWLKONNFGGAMIWAIDLDDPTGSFCDQGKFPLTSTLNKALGISTEG
TYAPDVPSEPYTTPPGSGSGGGSSGGSSGGSGFCADKADGLYPVADDRNAFWQCINGI
TYQHCQAGLVFDTSCNCCNWP"
<1. . . 60
    1245
                            1200
                                                                                                                                                                              1306 TGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGGAGCGGGAGTAGCAGCTCTGG 1365
                                                                                                                                                                                                                                                                                           1155 AGGAAGCTCTGGAGGCAGTGGATCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGC 1311
                                                                                                                                                                                                                                                                                                                                                                  AAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCA 1485
                                                                                                                                                                                                                                                                                                                                                                                       ROD 08-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ced (26-MAY-1999) Biology, University of California, San
9500 Gilman Drive, Mail Code 0368, La Jolla, CA 92093-03687,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="AKLLLVTGLALLLNAQLGSAYNLICYFTNWAQYRPGLGSFKPDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INPCLCTHLIYAFAGMQNNEITTIEWNDVTLYKAFNDLKNRNSKLKTLLAIGGWNFGT
                                                                                                                                                                                                                           1201 CGAGCCAGTGACTACTCCTCC-----AGGAAGTGGGAGTGGGGGTGGAAGCTCCGG 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
Bus musculus
Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF154571 1526 bp mRNA linear ROD 08-FEB-200
Mus musculus putative chitinase precursor (YNL) mRNA, partial cds.
  CATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTC
                                                                                                                 AGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGC
                                                                                         CACCCTGAAGAAGGCCCTCGGCCTGCAGGTGCAAGTTGCACGGCTCCAGCTCAGCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGA 1540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LE 2 (bases 1 to 1526)
3.8 Price, P.A., Harris, S.C. and Williamson, M.K. Direct Submission
5. Submitted (26-MAY-1999) Biology, 9500 Gilman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 1526)
Price, P.A., Harris, S.C. and Williamson, M.K.
YNL, A Putative Mouse Chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product-"putative chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism-"Mus musculus"
Strain-ATCC147668"
/db_xref-"ATCC:147668"
/db_xref-"AACC:147668"
/clone-"IMAGE:120927"
/tissue_type-"skin"
/1.:1526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="AAF31644.1"
/db_xref="GI:6934190"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .1526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF154571.1 GI:6934189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <1. .1419
/gene="YNL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="YNL"
<1. .1419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AF154571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                        1366
                                                                                                                                                                                                                                                                                                                                                             1426
1186
                                                                                         1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
AF154571
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
```

ద ð g à a ò g õ g ŏ q à g ò g ò g ò g

```
EGYTGENSPLYKYPTETGSNAYLNVDYVMNYWKNNGAPAEKLIVGFPEYGHTFILRNP
SDNGIGAPFSGSOGPAGATRQAGFWAYYEICTFLRSGATEWNDASOBYPYAYKANEWL
GYDNIKSFSYKAOWIKQNNFGGAMIWAIDLDDFTGSFCDQGKFPLTSTLNKALGISTE
GCTAPDYPSEPYTFPFGSGGGSSGGGSSGGGSGFCADKADGLYPVADDRNAFWOCING
ITYQOHCQAGLVFDTSCNCCNWP"
                                                                                                                                                                                                          /translation="makililytglailinaqigsaynlicyftuwaqyrpgigsfrpd
DINPCLCTHLIYAFAGMQNNBITTIEWNDVTLYRAFNDLKNRNSKLKTLLAIGGWNFG
                                                                                                                                                                                                                                                       TAPFTTMVSTSQNRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDKHLFTVLVK
EMREAFEQEAIESNRPRLMVTAAVAGGISNIQAGYEIPELSKYLDFIHVWTYDLHGSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102 CCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTICGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 ACTITIGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           462 TCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522 AGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             582 AGGAAATGCGTGAAGCTTTTGAGCAGGGGCCAAGCAGATCAACAAGCCCAGGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     342 TCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTACACTGGAGAGAACAGCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1530
                                                                                                                                         precursor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1041.4; DB 10; Lengt
Pred. No. 4.1e-269;
0; Mismatches 231; Indels
                                                                                                                                 /product="acidic mammalian chitinase
/protein_id="AAG60018.1"
/db_xref="G1:12597291"
                                                                                           /note="chitinase precursor; AMCase"
              /dev_stage="9-11 weeks"
3. .1424
                                                                   /EC_number="3.2.1.14"
  tissue_type="lung"
                                                                                                                                                                                                                                                                                                                                                                                                                    366 g
                                                                                                                   /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64.1%;.
ilarity 83.3%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                        υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Simi
Matches 1199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                  1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1487
  1001
                                                                                           1067
                                                                                                                                                                                                                                  1021
                                                                                                                                                                                                                                                                             1187
                                                                                                                                                                                                                                                                                                                           1081
                                                                                                                                                                                                                                                                                                                                                                        1247
                                                                                                                                                                                                                                                                                                                                                                                                                      1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCTCGGGAGGCAGTGGATTCTGTGTCTGTCAGAGCCAACGGCCTCTACCCCGTGGCAA 1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1530 bp mRNA linear ROD 27-FEB-2001 acidic mammalian chitinase precursor, mRNA, complete
                                             901
                                                                                                                                         961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1530)

BOOT, R.G., Blommaart, E.F., Swart, E., Ghauharali-van der Vlugt, K., Bill, N., Moe, C., Place, A. and Aerts, J. M.

Identification of a novel acidic mammalian chitinase distinct from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochemistry, Academic Medical
Meibergdreef 15, Amsterdam 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCCCCCCACCTCTGGTGCTGGTCCTGGGGCCCTATGCCAAGGAGTCTGGGATCTGGG
                                                                                         CITACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGCATGCCCTC
                                                                                                                 CCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCC
                                                                                                                                                                                    AGGAAGTGCCTTATGCCTATCAGGGCAATGTGGGTTGGCTATGACAACATCAAGAGCT
                                                                                                                                                                                                          TCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCCATGGTCTGGGCCA
                                                                                                                                                                                                                                                                                                       TTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACTTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCTTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAACAGAAATGCCTTCTGGCACTGCATGGAGTCACGTACCAGCAGAACTGCCAGG
                                             GTGCCCCTACCTCTGGTGATGGCCCTGCTGGGCCCTATACCAGACAGGCTGGGTTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGGCTTGTTTGACACCACTGTGATTGCTGCAACTGGGCATAAACCTGA 1540
| |||||||| || || ||||||||| ||||||||| || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chases 1 to 1530)
Boot, R.G., Verhoek, M., Swart, E. and Aerts, J.M. Direct Submission
Submitted (26-JUL-2000) Dept. of Biochemistry, Center, University of Amsterdam, Melbergdreef
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chitotriosidase
J. Biol. Chem. 276 (9), 6770-6778 (2001)
21125893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/strain="BALB/c"
/db_xref="taxon:10090"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:12597290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Netherlands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF290003
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF290003
AF290003.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11085997
                                                                                      1008
                                                                                                                                                                                  1068
                                                                                                                                                                                                                                                                                                                        1022
                                                                                                                                                                                                                                                                                                                                                                      1188
                                                                                                                                                                                                                                                                                                                                                                                                                 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1373
                                                                                                                                    902
                                                                                                                                                                                                                               962
                                                                                                                                                                                                                                                                             1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
AF290003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
```

ä

셤 οŽ 셤 οy a ò P ò g ò 8 ò g ò g à g ŏ g

õ

```
ACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACAACATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAAACCAGGGCAAGTTTCCCCTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCAGGCTGATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGGTGCCCCCACCTCTGGTGCTGCTCCTGCTGGCCCCTATGCCAAGGAGTCTGGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGCTCCAGCTCAGCCC
                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                            1188;
                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                         Score 1037.2; DB 9;
Pred. No. 5.4e-268;
0; Mismatches 3;
 -665-2888, Fax:81-88-637-1035)
Location/Qualifiers
1. .1188
                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                           /gene-"TSA1902-S"
150. .1097
                                                                                          150. .1097
/gene="TSA1902-S"
                               1. .1188
/organism="Homo
                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                          Query Match 63.8%;
Best Local Similarity 99.7%;
Matches 1039; Conservative
                                                                 .1188
    Tel:81-88
                                                                                                                                                                                                                                                     280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             807
                                                                                                                                                                                                                                                                                                                                                584
                                                                                                                                                                                                                                                                                                                                                                                                 644
                                                                                                                                                                                                                                                                                                                                                                                                                          207
                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  627
                              source
                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                    gene
               FEATURES
                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                      1001
                                                                                                                                                           1001
                                                                                                                                                                                                            1121
                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                  1181
                                                                                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                                                                                      1241
                                                                                                                                                                                                                                                                                                                                              1140
                                                                                                                                                                                                                                                                                                                                                                       1301
                                                                                                                                                                                                                                                                                                                                                                                                1200
                                                                                                                                                                                                                                                                                                                                                                                                                          1361
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                    941
                                                                            840
                                                                                                                                 900
                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Salto, A., Ozaki, K., Fujiwara, T., Takahashi, E. and Tanigami, A. Direct Submission

Submitted (16-MAR-1999) Akihiko Saito, Otsuka Pharmaceutical Co., Ltd., Otsuka GRR Research Institute; 463-10 Kaqasuno Kawauchi-cho, Tokushima, Tokushima 771-0192, Japan (E-mail:saito@otsuka.gr.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AB025009 1188 bp mRNA linear PRI 25-NOV-199
Homo sapiens TSA1902-S mRNA for novel member of chitinase family,
complete cds.
AB025009
AB025009.1 GI:6467178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                     GAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGGCCCCTATGCCAAGGAGTCTGGGA
                                                                                                                 1081 GGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA
                                                                                                                                                                                                                                                                                                                                                                                   CTGGAGGCAGCTCGGGAGGCAGTGGATCTGTGCTGTCAGAGCCAACGGCCTCTACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1312 TGGCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGTT
             CCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCA
                                                                                                                                                                                                                        GGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAA
                                                                                                                                                                                                                                                                                                                                                                                                                         CCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAAGGGAGTAGCAGCT
                                                  TCATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTG
                                                                                                                                                         TCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATG
                                                                                                                                                                                                                                                               AGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCT
                                                                                                                                                                                                                                                                                                                                                                      1242 TCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAGGTCAGG
ACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Salto, A., Ozaki, K., Fujiwara, T., Nakamura, Y. and Tanigami, A. Isolation and mapping of a human lung-specific gene, TSA1902, encoding a novel chitinase family member (gene 239 (2), 325-331 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family; TSA1902-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           novel member of chitinase
Homo sapiens cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 1188)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalla; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (sites)
                                                                                                                                                        1002
                                                                                                                                                                                                            1062
                                                                                                                                                                                                                                                               1122
                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                  1182
                                                                                                                                                                                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                                                                                                                                                                       1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1372
822
                        721
                                                  882
                                                                           781
                                                                                                    942
                                                                                                                              841
                                                                                                                                                                                  901
                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
AB025009
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
REFERENCE
```

g ò g

ç

ö 643

266 763 326 823 386 883

206 703 1003

566

446

943

1063

1123

1183

989

1243

셤

g

ò g à g ò a

ò

ò g

```
/product-"secretory protein precursor"
/protein_id="AAB62394.2"
/protein_id="AAB62394.2"
/d_xxef="cg::11140897"
/translation="MAKLILVYGLAILLNVQLGSSYQLMCYYTSWAKDRPIEGSFKPG
NIDPCLCTHLIYAFAGMQNNEITYTHEQDLRDYEALNGLKDKNTELKTLLAIGGWRFG
                                                                                           PAPESAMVSTPQNRQIFIQSVIRFLRQYNFDGLNLDMQYPGSRGSPPKDKHLFSVLVN
EMRKAFEBESSVEKDI PRLLLTSTGAGI IDVIKSGYKI PELSOSLDVI TOVMTVDLHDPK
OGTGENSPLYKSPYDIGKADLNVDS IISYWKDHGAASEKLIVGFPAYGHTFILSDP
SKTGIGAPTI STGPPGKYTDESGLLAYYEVCTFLNEGATEWNDAPQEVPYAYGGNEWV
GYDNVRSFKLKAQWLKDNNLGGAVVWPLDMDDFSGSFCHQRHFPLTSTLKGDLNIHSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 490 AAGGAAATGCGTAAAAGCTTTTGAGGAAGAATCTGTGGAGAAAGACATTCCAAGGCTGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          521 GAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         701 CTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281 GGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341 TTCAATGGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             401 AACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               461 ATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCACTGCTGCTGCTGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAA
                                                                                                                                                                                                                                                                                                                                                                                         Length 1525;
                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                      Score 701.8; DB 10;
Pred. No. 1.2e-177;
0; Mismatches 307;
                                                                                                                                                                                                                                                            'product="secretory
                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                           335
                                                                                                                                                                                           13. .75
/gene="Ym1"
76. .1206
                                                                                                                                                                                                                                                                                                                                                                                        43.28;
                                                                                                                                                                                                                                                                                       /gene="Ym1"
1507
                                                                                                                                                                                                                                          'gene="Ym1"
                                                                                                                                                                                                                                                                           1487. .1492
                                                                                                                                                                                                                                                                                                                        'gene="Ym1"
                                                                                                                                                                                                                                                                                                                                       343 C
                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 74.3
Matches 886; Conservative
                                                                                                                                                                               SCKGPY"
                                                                                                                                                                                                                                                                                                                                           ๙
                                                                                                                                                                                                                                                                                                                                           434
                                                                                                                                                                                                                                                                           polyA_signal
                                                                                                                                                                                            sig_peptide
                                                                                                                                                                                                                            mat_peptide
                                                                                                                                                                                                                                                                                                        polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                               1423
                                                                                                                                1483
                                                                                                                                                                                                             ROD 15-JUN-2001
                                                                                                                                                                                           CAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGACCT 1543
                                                                                                                                                                                                                                                          926
                                                                                             986
                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus secretory protein precursor (Yml) mRNA, complete cds. M94584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
1 (bases 1 to 1525)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu, C.H. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chang, N.-C.A., Liu, C.-H. and Chang, A.C. Molecular characterization of a secretory protein (YM-1) transiently expressed by activated murine peritoneal macrophages Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112, R.O.C.
4 (bases 1 to 1525)
Chang, N.-C.A., Liu,C.-H. and Chang, A.C.
Direct Submission
Submitted (13-NOV-2000) Microbiology and Immunology, National
Yang Ming University, 155, Sect. II, Li-Noon St, Talpei, Talwan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (27-APR-1993) Microbiology and Immunology, National Yang-Ming University, 155, Sect. II, Li-Noon St, Taipei, Taiwan
GGAGGCAGCTCGGGAGGCAGTGGATTCTGTGTCAGAGCCAACGGCCTCTACCCCGTG
                                                                              GCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGAACTGC
                                                                                                                                                             GCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  uence update by submitter
Nov 13, 2000 this sequence version replaced gi:202441
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A macrophage protein, Yml, transiently expressed during inflammation is a novel mammalian lectin J. Biol. Chem. 276 (20), 17497-17506 (2001) 21264517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 1525)
Chang, N.C., Hung, S.I., Hwa, K.Y., Kato, I., Chen, J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism-*Mus musculus"
/db_xref-*taxon:10090"
/clone_lib=*PEC in lambda gtll and ZAPII"
1.1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 (bases 1 to 1525)
Chang, N.-C.A., Liu, C.-H. and Chang, A.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                                       TCCTGCAATAAAATCAGCAGTC 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Ym1"
13. .1209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1, .1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R.O.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chang, A.C.
1304
                                                             1364
                                                                                                                           1424
                                                                                                                                                                                           1484
                                                                                                                                                                                                                           1047
                                                                                                                                                                                                                                                         1544
                                                                                                                                                                                                                                                                                       1107
                                                                                                                                                                                                                                                                                                                       1604
                                                                                                                                                                                                                                                                                                                                                      1167
                                                                                           927
                                                                                                                                                             987
                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                    M94584
```

ö 160

Gaps

220 129 280 189 340 249 400 309 460 369 520 429 280 489 640 549 700 609 760 699

```
ATCGTTGGATTCCCTACCTATGGACACACATCCTGAGCAACCCCTCCAACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                              333
                                                                                                                                                                                 ö
           /product="ECF-L
                                                                                                                                                           tch 42.9%; al Similarity 74.1%; 882; Conservative
                                                                                                                              υ
                                                                                                                            338
                                                                                                                   SCKGPY
                                                                                                                              423
                                                                                                                                                            Query Match
Best Local S
Matches 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         524
                                                                                                                                                                                                      104
                                                                                                                                                                                                                                                                                                                                                                                                                       404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                164
                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                   284
                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     884
                                                                                                                              SASE COUNT
                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                  Ω
                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                         δý
                                                                                                                                                                                                                                                          1180
                                                                                                                                                                       1060
                                                                                                                                                                                                                1120
                                                                                                                                                                                                                          GGAATTGGTGCCCCCACCTCTGGTGCTGCTCCTGCTGGGCCCTATGCCAAGGAGTCTGGG 1000
                                                                                                                                                                                                                                                                                                    1181 TGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTA 1240
                                                                                                                                                                                                                                                                                                                                                                                                                       ROD 12-JAN-2000
                                                                                                                                                                                           696
                                                                                                       849
                      729
                                          880
                                                               789
                                                                                   940
                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Mus 1 (1956)
Owhashi, M., Arita, H. and Hayai, N. Identification of a novel eosinophil chemotactic cytokine (ECF-L) as a chitinase family protein J. Biol. Chem. 275 (2), 1279-1286 (2000)
            CTCATGGTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCTCCAACACT
                                                                                              ATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGAT
                                                                                                                                                                                           CTCCTGGCTTACTATGAGGTTTGTACATTTCTGAATGAAGGAGCCACTGAGGTCTGGGAT
                                                                                                                                                                                                               GCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACAACATC
                                                                                                                                                                                                                                                          AAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAAATTTTGGAGGCGCCATGGTC
GGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCC
                                          TACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAG
                                                                                                                                                                                                                                                                                                                                                         1241 ATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCC 1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    On Oct 7, 1999 this sequence version replaced gi:1545818 Sequence updated (05-Oct-1999).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (06-SEP-1996) Makoto Owhashi, The University C Tokushima, Faculty of Integrated Arts and Sciences; 1-1 Minami-Johsanjima, Tokushima, Tokushima 770, Japan (E-mall:ohashi@las.tokushima-u.ac.jp, Tel:0886-56-7261, Fax:0886-56-7298)
                                                                                                                                                                                                                                                                                                                                                                                                          D87757 1506 bp mRNA linear
Mus musculus mRNA for ECF-L precursor, complete cds
D87757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus bone marrow cDNA to mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/db_xref="taxon:10090"
/tissue_type="bone marrow"
1. .1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="mECF-L"
1. .1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /gene="mECF-L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:6015435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 1506)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ECF-L precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                     D87757.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Owhashi, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus
                                                                                                                                                                       1001
                                                                                                                                                                                          910
                                                                                                                                                                                                               1061
                                                                                                                                                                                                                                                         1121
                                                                                                                                                                                                                                                                                                                                                                  1150
 761
                                          821
                                                                                  881
                                                                                                       790
                                                                                                                            941
                                                                                                                                                  850
                                                                                                                                                                                                                                    970
                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
D87757
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                    a
                                                                                                                            õ
                                                                                                                                           8
                                                                                                                                                                ò
                                                                                                                                                                                     Q
                                                                                                                                                                                                             à
                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                             용
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                 셤
                  셤
                                          å
                                                        g
                                                                            à
 ð
```

```
/protecin_dd="Ball34813458".
/db_xref="G1:6015436".
/db_xref="G1:6015477HEQDLRDFEALMGLKDRNTELATGGWRFG
PASFSAMVSTPQNRQIFIQSVIRFLRQNFDGLNLDWOYPGSRGSPPKDKHLFSVLWR
PEMRAPERESYEKDIPRLLTSTGATIDVIRSGYKTPELSGLDYITOWHYDLHDPK
DGYTGENSPLYKSPPJGSKSDLNUDSIISYWKDHGAASEKLINGFPAYGHTFILSDP
SKTGIGAPTISTGSPROKKTDESGLLAYYEVGTFLNEGATEWNDAPQEVPYAYGONEW
GYDNVRSFKLKAQWLKDNNLGGAVWPLDMDDFSGSFCHQRHFPLTSTLKGDLNIHSA
                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      883
                                                                                                                                                                                                                                                                                                                                                       163
                                                                                                                                                                                                                                                                                                                                                                                                                                      223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTACCAGCTGATGTGCTACTATACCAGTTGGGCTAAGGACAGGCCAATAGAAGGGAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 ATGCAGAATAATGAGATCACTTACACACATGAGCAAGACTTGCGTGACTATGAAGCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464 ACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                ATGGCCAAGCTCATTCTTGTCACAGGTCTGGCAATTCTTCTGAACGTACAGCTGGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                         ATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCT
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1506;
                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                        Score 697.2; DB 10;
Pred. No. 2e-176;
); Mismatches 308;
                                                                                                                                                                                                               ų
                                                                                                                                                                                                             412
```

Dp 40	781 ATTGTGGGATTTCCAGCATATGGGCATACCTTTATCCTGAGTGACCCTTCTAAGACTGGA 840		
Qy 9	944 ATTGGTGCCCCACCTCTGGTGCTGGTCCTGGGCCCTATGCCAAGGAGTCTGGGATC 1003		
Dp 98	841 ATTGGTGCCCTACAATTAGTACTGGCCCACCAGGAAAGTACACAGATGAATCAGGACTC 900		
Qy 10 Db· 9	1004 IGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCC 1063 	sis	_peptide
		BASE COU	BASE COUNT 326 ORIGIN
		Query Match Best Local	Match Jocal Simila
Oy 11:	1124 AGTITCGATATTAAGGCICAAIGGCITAAGCACAACAATTIGGAGGCGCCAIGGICIGG 1183 	Matches	104 America
	GCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTCCCCCTAATC	<u>8</u>	104 Algaci
Db 10		δ	164 GCCTA
Oy 12	1244 TCCACCCTGAAGAAGGCCCTCGGGCCTGCAGGTGCACGGCTCC 1293	qq	 61 TCCTA
Db 11,	1141 TCTACTTTAAAGGGAGATCTCAATATACACAGTGCAAGTTGCAAGGGGCCC 1190	Qy	224 TTCAT
RESULT 13		qq	121 TTCAA
AY049765		VO	284 AGGCA
DEFINITION	A1049/65 A1049/65 Aus musculus secreted protein precursor Ym2 mRNA, complete cds.	qa	
VERSION		Qy	344 AATGG
SOURCE	house mouse.	, qa	241 AATGG
	mus.mascuta. Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia: Butheria: Rodentia: Sciurognathi: Muridae: Musinae:	QY	404 TTCGG
REFERENCE	1 (bases 1 to 1209)	QQ	301 TTTGG
TITLE	mechology, make market, who was the market make the market of the Wallettin-binding protein is dependent on interlement (TL)-4 and TL-13 equal transduction, identification of	Qy	464 ACCTC
TANATIOT	a novel allergy-associated protein transuccion: Identification of a novel allergy-associated protein	qa	1 1 361 AAGTC
MEDLINE	21551268 21551268	δ	524 TACCC
REFERENCE	Classes 1 to 1209)	qq	421 TACCC
TITLE	Puret Submission Circuit (1707)	QY	584 GAAAT
	Curtin School of Medical Research, Australian National University, Ourtin School of Medical Research, Australian National University,	qa	.
REFERENCE	3 (bases 1 to 1209) Webb.B.C. and Foster.P.S.	ογ	644 ACTGC
TITLE	Direct Submission Submitted (06-2002-2002) Riochemietry and Molocular Biology Tohn	qa	541 ACTIC
	Curtin School of Medical Research, Australian National University, Off Mills Rd. Arthon, Camberra, Apr. 2601	Qy	704 TCACAC
REMARK	Sequence update by submitters, Act 2001, Australia Soquence update by submitters werelon souland at 1870816	qq	601 TCTCAC
FEATURES	version replaced	0.y	764 TACACI
	/organs="Mus musculus" /strain="Pals/~"	qu	661 TACACT
	/db_xref="taxon:10090" /db_xref="taxon:10090" /note="isolated from the lung layage from allergic mice"	δλ	824 CTCAAT
CDS	TI-4 and TI-13 signs	q _O	721 CTCAAT
		δλ	884 ATCGT1
	<pre>/product="secreted protein precursor Ym2" /protein_id="AAL03953.2"</pre>	đ	781 ATTGTG
,	/db_xref="G1:22123907"	, 0y	944 ATTGG

```
/translation="Maklilutglaillunglessyolmcyytswakdprptegsfkpg
DippCLTHLIYAFAGMKNNEITYLSEQDLADYEALNGLKDRNTELKTLLA.IGGWRFG
PAPFSSWYSTPQNRQTIKSYIRFLEGYNFDGLNLDWQYFGSRGSPPRDKHLFSYLVQ
EMRRAPEESTYLMIPPRILLISTGAGFIDVYRSGYKIPELSQSLDYTQVMYDLHDFX
NGYTGENSPLYKSPYDIGKGADLNVDSIITYWKDHGAASEKLIVGFPAYGHTFILSDF
SKNGTGDPPVYAGAPPGKATNEGGLLAYFEICTFLNEGATEIPDATQEVYATIGNEWV
GYDNVRSFKLKAQWLKDNNLGGAVVWPLDMDFSGSFCHQGRFPLTKRDLNVHSA
SCKASYRGEL"
                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FIGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAGGAGTCTGGGATC 1003
                                                                                                                                                                                                                                   163
                                                                                                                                                                                                                                                                                           223
                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                  283
                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                        CAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCT
                                                                                                                                                                                                                                                    ACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGC
                                                                                                                                                                                                                                                                                                                                                               2AGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIGGCICICGIGGAGCCCTCCTCAGGACAAGCAICTCTTCACIGICCIGGIGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                  IGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                           AGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIGGAGAGAGACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ITGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                         Score 689.4; DB 10; Length 1209;
Pred. No. 2.5e-174;
0; Mismatches 316; Indels 0;
                                                                                                                                  Ļ
                                                                                                                                328
                                                                                                                                  g
                                                                                                                                  282
                                                                                                                                                                         42.4%;
larity 73.6%;
Conservative 0
                                                                                                                                  273 c
                                                                                                                    1. .63
                                                                                                                                  ď
                                                                                                                                o
```

Best Local Similarity 73.5%; Pred. No. 6.7e-174; Matches 878; Conservative 0; Mismatches 317; Indels 0; Gaps 0;	104 ATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAĠCTCGGCTCT 163 	164 GCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGC 223	224 TTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGG 283	284 AGGCAGAACAACGAGCACCCATCGAATGGAACGATGTGACTCTACCAAGCTTTC 343 	344 AATGGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAAC 403 	404 TICGGACTGCCCTITCACTGCCATGGTTTCTACTCCTGAGAACGGCCAGACTITCATC 463 11	464 ACCTCAGTCATCAAATTCCTGCGCCAGTATGAGGTTTGACGGGCTGGACTTTGACTGGGG 523	524 TACCTGGTTCTCGTGGGAGCCTCCTCAGGACAGCATCTCTTCACTGTCCTGGTGCAG 583 [584 GAAATGCGTGAAGCTTTTGAGCAGGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC 643	644 ACTGCTGCTGGCTGGCATCTCCANTATCCAGTCTGGCTATGAGATCCCCCAACTG	704	764	824 C	884 ATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGA 943	944	1004 TGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCC 1063	1064 CCTCAGGAAGTGCCTTATGCCTATCAGGCCAATGTGTGGGTTGGCTATGACAACATCAAG 1123 	1124 AGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGG 1183
	B &	Oy Op	oy D	QY Db	Q D	Qy	Oy Db	oy da	γ O	oy da	Oy Dp	oy G	oy da	Qy Dp	QV Db	Oy Db	S G	οy
	1004 TGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCC 1063 	1064 CCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAG 1123 	1124 AGCTTCGATATTAAGGCTCAATGGCTTAAGCAACAAATTTGGAGGCGCCATGGTCTGG 1183 	1184 GCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAAGCGGCAAGTTTCCCCTAATC 1243 	1244 TCCACCCTGAAGAGCCCTGGGCTGCAGAGTGCAAGTTGCACGGCTCCAGCTC 1298 		AYO65557 Aus musculus complete cds AYO65557	AIOSSS/, 1 G1:18080213 Mus musculus SM Mus musculus	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. E 1 (bases 1 to 1209) S Chang, N C. A.		Direct Su L Submitted National Taipei 11	RES Location/Qualifiers source 11209 /organism="Mus musculus" /strain="BALB/c"	a)		/product-"putative secretory protein precursor" /proteif-"d-"AAL5751.1" /db_xref-"G1:18086514" /translation-"MAKLILLYTGLAILLNYQLGSSYQLMCTYTSWAKDRPTEGSFKPG	NIDPLCTHILTARAGMENETTISEQDLARYEGARAFEGARESSAVSTPORROTETTALAGGMENEG PAPESSAVSTPORROTETIS SVIETE STEAGOST NIDPLAGGES PER STANDARDE STANDARDE SVIETE STEAGOST NIDPLAGGES STANDARDE SVIETE STEAGOST STANDARDE SVIETE SVIETE STEAGOST STANDARDE SVIETE SVIET	326 a	Match 42.3%; Score 687.8; DB 10; Length 1209;
q	oy G	oy da	Qy Db	Qy	Oy Dp	RESULT 14	DEFINITION ACCESSION	VERSION KEYWORDS SOURCE ORGANISM	REFERENCE AUTHORS	TITLE JOURNAL REFERENCE AUTHORS	TITLE JOURNAL	FEATURES Sou	gene	CDS			BASE COUNT	OKIGIN Query Match

```
completed: July 3, 2003, 07:21:38 ne : 4281.04 secs
547
                                                                                            727
                                                                                                                                                                                                         1044
                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                        1104
                                                                                                                                                                                                                                                                       1164
                                                                                                                                                                                                                                                                                                    1224
                                                                                                                                                                                                                                                                                                                                                                                                                  1297
               684
                               507
                                                                            804
                                                                                                            864
                                                                                                                            787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search co
                              g
                                                             g
                                                                                            g
                                                                                                                        Q
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                g
               ò
                                               ò
                                                                            ò
                                                                                                            ò
                                                                                                                                           δ
                                                                                                                                                          g
                                                                                                                                                                        δ
                                                                                                                                                                                       요
                                                                                                                                                                                                         ò
                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
              20-JUN-2002
AGCTTCAAGTTGAAGGCTCAGTGGCTCAAGGACAACAATTTAGGAGGTGCCGTGGTCTGG 1080
                                                                                                                                                                                                                                                               ë
                                                                                                                                                                                                                                                                              GACTGGTGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC 143
                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                           263
                                                                                                                                                                                                                                                                                                                                                                           323
                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                       443
                                                                                                                                                                                                                                                                                                                                                                                                                                               503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                           GCCTGCCGCTGAGCTGCATCATGGTGCGGTCTGGGCCTGGGCAGGTTTCATGGTCCTGC
                                                                                                                                                                                                                                                                                                            144 TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                                                                                                                           ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACATCGACCCCTGCCTCTGTACCCACC
                                                                                                                                                                                                                                                                                                                                                    TGATCTACGCCTTTGCTGGGAGGACAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                 AGAACCGCCAGACTITCAICACCICAGICATCAAAITCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              624 ACAAGCCCAGGCTCATGGTCCTGCTGCAGTAGCTGCTGCCATCTCCAGTCTG
                                                                                                                                                                                                                                                                                                                      TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                     1244 TCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTC 1298
                                                                                                                                                                                                                                                               Gaps
                                                                                                     PAT
                                                                                                                                                                                                                                                              30;
                                                                                                                                                                                                                                               Length 1656;
                                                                                                                                                                                                                                              Score 483; DB 6; Length 16
Pred. No. 9.7e-119;
0; Mismatches 545; Indels
                                                                                                     DNA
                                                                                                                                                                     Tary, P.W.
Chitinase materials and methods
Chitinase materials and methods
Patent: US 6372212-A 3 16-AFR-2002;
Location/Qualifiers
1. 1656
                                                                                                                                                                                                                        347
                                                                                                /organism-"unknown"
1 497 c 447 q
                                                                                                                                                                                                                                              29.78;
                                                                                                                                                                  1 (bases 1 to 1656)
                                                                                                                                                                                                                                                     Local Similarry ....hes 870; Conservative
                                                                                                                                                          Unclassified
                                                                                                                                                                                                                        ø
                                                                                                                                                                                                                       365
                                                                                                                                           Unknown.
                                                                                                                                                  Unknown
1021
                                                                                                                                                                                                                                                                              84
                                                                                                                                                                                                                                                                                                                                           204
                                                                                                                                                                                                                                                                                                                                                                                        187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    564
                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                         264
                                                                                                                                                                                                                                                                                                                                                                                                                                       384
                                                                                                                                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187
                                                                                                                                                                                                         source
                                                                                                           DEFINITION
                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                   RESULT 15
AR206042
LOCUS
                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                          AUTHORS
                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                       ö
g
              ð
                             셤
                                             ò
                                                         g
                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                        යි
                                                                                                                                                                                                                                                                                                                                                                       $ G
                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
```

```
1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1283
                                                                                                                                                                                                                                                                                                                                                                                                                            984 ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAG 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1284 GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG 1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021 TGGGCTTTGATGATGTGGAGGCTTCAAAACCAAGGTCAGCTATCTGAAGGAGGGAC 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1404 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1464 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA 1523
                                                                                                                                                                                                                                                                                                             846
                                                                                                                                                                                                                                                                                                                                                   983
                                                                                                                                                                                                                                                                                                                                                                                          906
                                                                        999
                                                                                                               803
                                                                                                                                                     726
                                                                                                                                                                                            863
                                                                                                                                                                                                                                786
                                                                                                                                                                                                                                                                        923
                                                                                                               GGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTG
                                                                                                                                                                                                                                                                                               TIGGCTAIGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1344 GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTATGAGATCCCCAACTGTCACAGTACCTGGACTACATCATCATGACCTACGACC
                                                                            GATACGAGGTGGACAAATCGCCCAGAACCTGGATTTTGTCAACCTTATGGCCTACGACT
                                                                                                                                                                                              ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                        GAGCACCAGCTGAGAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGA
                                                                                                                                                                                                                                                                                                                                                     924 GCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGTGCTGGTCCTGCTGGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGGCCTGCAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGGAGGCGCCATGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1201 CAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1524 ACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ||||
|1417 CCTGG 1421
```

```
. 01
                                                                                                                                                                                                                                                                     July 2, 2003, 22:31:11; Search time 372.46 Seconds (without alignments) 9825.200 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N. Censeag_101001:

1. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

2. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

4. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

5. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

5. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

7. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

8. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

8. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

10. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

11. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

12. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*

13. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

14. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*

15. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*

16. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*

17. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*

18. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*

19. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

20. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

21. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

22. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

23. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

24. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

25. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

26. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

27. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*

28. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA20018.DAT:*

29. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA20018.DAT:*

21. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

22. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

23. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*

24. (SIDS2/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-004-219B-2
1625
1 gctttccagtctggtggtga......ctgcaataaaatcagcagtc 1625
                                                              GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY_NUC Gapon 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                            Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	nesci iputoli	Disease treatment	Disease treatment	Novel human coding	Disease treatment	Human digestive sy	.DNA encoding novel	Human chitinase cl ·	MO-13B clone of hu	Human chitinase cD
	£	T.	AAH42025	AAH42013	ABN59993	AAH42023	AAK88635	ABK11713	AAV10436	AAZ21848	AAD03760
	9	9 :	22	22	24	22	22	24	19	20	55
	Query	Lengen.	1678	1368	1369	1469	746	638	1656	1656	1656
ФP	Query	March	94.1	84.1	77.9	43.2	38.7	38.7	29.7	29.7	29.7
	5	acore	1529.6	1366.4	1266.2	701.8	629.2	628.4	483	483	483
	Result		-	7	m	4	S	9	7	80	6

Human chitinase cD Human catilage gp Human cartilage gp	Murine oviduct spec CDNA sequence #402 Bovine oviduct spe Hamster oviduct spe Bovine whey protei YKL-40 gene. Homo Human cancer marke Drosophila melanog Osteoarthritis tis Drosophila melanog Cone encoding poly Drosophila melanog Manduca sexta larv Human secreted pro Drosophila melanog Human secreted pro Drosophila melanog Human secreted pro Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog	nTS ide SEQ ID NO: 16. occlusive pulmonary disease; atment of bronchial asthma, ectious disease
488600048866666666666666666666666666666	16 AA090442 24 AAS65415 16 AA0904442 16 AA0904442 18 AAT99452 21 AA0852455 21 AA0852455 22 AA123078 23 AAN81756 9 AAN81756 9 AAN81756 23 AAL03557 24 AAC02537 24 AAC0233 25 AA1442044 27 AA442044 28 ABL15099 21 AAC00233 22 AA142044 23 ABL15094 21 AAC00233 23 ABL15094	ALIGNME 1678 BP. ed oligonucleot ction; chronic 8015. 4467. LTD. and DNA for tre
183 29.7 1.4 29.6 1.4 29.6 1.4 29.6 1.6 29.6 1.6 29.6 1.6 29.4 22.7 22.7 23.6 22.7 23.6 22.7 23.6 22.7 23.6 22.7 23.6 22.7 23.6 23.7 23.6 23.7 23.7 23.7 23.7 23.7 23.7 23.7 23.7	7.00	5 standard; D 5; 2001 (first treatment re treatment; d al asthma; ds piens. 6633-A1. 2000; 2000WO- 1999; 99JP- TAKEDA CHEM hi A, Morita 01-397791/42. teins, peptid
0.12 E 4 2 0.0 1 2 E 4 8 0.0 1 2 E 4 8 0.0 1 2 E 6 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESULT 1 AAH42025 ID AAH42025 XX AC AAH42025 XX DT 24-AUG-20 XX DE DISEASE t X

8 6

```
1049
                               1088
                                                   1109
                                                                      1148
                                                                                        1169
                                                                                                                                                                 1289
                                                                                                                                                                                                       1349
                                                                                                                                               1268
                                                                                                                                                                                                                         1388
                                                                                                                                                                                                                                           1409
                                                                                                                                                                                                                                                                                 1469
                                                                                                                                                                                                                                                                                                  1508
                                                                                                                                                                                                                                                                                                                                                                            1628
                        AGGAGTCTGGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTC
                                                                                        ATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACACAACAATTTGGAG
                                                                                                 AGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCT
                                                                                                                                                                                                                                          GGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACG
                                                                                                                                                                                                                                                                                         GCGCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCA
                                                                                                                                                                                                                                                                               GCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGT
                                                                                                                                                                                                                                                                                                                    ACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGG
                                                                                                                                                                                                                                                                                                                                                         CATAAAACCTGACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTTTGCTTAGGACATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ë
                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment; infection; chronic occlusive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disease treatment related oligonucleotide SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA; 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-NOV-2000; 2000WO-JP08015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nakanishi A, Morita S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH42013 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bronchial asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200136633-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TAKE ) TAKEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAY-2001
                                                  1050
                                                                    1089
                                                                                       1110
                                                                                                         1149
                                                                                                                                                                                                                                                                                                                    1470
            990
                                                                                                                            1170
                                                                                                                                              1209
                                                                                                                                                                                                                                          1350
                                                                                                                                                                                                                                                             1389
                                                                                                                                                                                                                                                                               1410
                                                                                                                                                                                                                                                                                                  1449
                                                                                                                                                                                                                                                                                                                                     1509
                                                                                                                                                                                                                                                                                                                                                        1530
                                                                                                                                                                                                                                                                                                                                                                           1569
                                                                                                                                                                                                                                                                                                                                                                                              1590
                                                                                                                                                                                                                                                                                                                                                                                                              1629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAH42013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAH42013
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                             g
                                                 δý
                                                                ద
                                                                                     οy
                                                                                                        g
                                                                                                                            ò
                                                                                                                                           g
                                                                                                                                                                ò
                                                                                                                                                                                 g
                                                                                                                                                                                                     οy
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCCAACACTGGAATTGGTGCCCCACTTCGTGCTGGTCCTGGGCCCTATGCCA 989
                                                                                                                                    149
                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   929
                                                                                                                                                                         209
                                                                                                                                                                                            248
                                                                                                                                                                                                              269
                                                                                                                                                                                                                                 308
                                                                                                                                                                                                                                                   329
                                                                                                                                                                                                                                                                    368
                                                                                                                                                                                                                                                                                        389
                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                                                                                              488
                                                                                                                                                                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                   548
                                                                                                                                                                                                                                                                                                                                                                                                     569
                                                                                                                                                                                                                                                                                                                                                                                                                       608
                                                                                                                                                                                                                                                                                                                                                                                                                                         629
                                                                                                                                                                                                                                                                                                                                                                                                                                                            668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    968
                 The present invention provides the sequence of a protein which can be used in the treatment and prevention of infectious diseases. Inhibitors of the protein can be used to treat bronchial asthma and chronic occlusive pulmonary disease. The present sequence is an oligonucleotide described in the exemplification of the invention.
                                                                                                                                              TGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATT
                                                                                                                                                                       TGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCCAGTACCGGC
                                                                                                                                                                                 CAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCT
                                                                                                                                                                                                                      ACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTC
                                                                                                                                                                                                                                                          TTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACC
                                                                                                                                                                                                                                                                                                                                    GCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                        ACTITGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                            CTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTGACACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                Length 1678;
                                                                                                                 ö
                                                                                                                  Indels
                                                                            Sequence 1678 BP; 397 A; 497 C; 418 G; 366 T; 0 other;
                                                                                               22;
                                                                                                                 4;
                                                                                               DB
                                                                                             Score 1529.6;
Pred. No. 0;
0; Mismatches
Page 107-108; 114pp; Japanese
                                                                                              94.1%;
99.7%;
                                                                                                       Best Local Similarity 99.7
Matches 1532; Conservative
5
                                                                                                                                  90
                                                                                                                                                    129
                                                                                                                                                                       150
                                                                                              Query Match
                                                                                                                                                                                                            210
                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                 270
                                                                                                                                                                                                                                                                                     330
                                                                                                                                                                                                                                                                                                        369
                                                                                                                                                                                                                                                                                                                          390
                                                                                                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                              450
                                                                                                                                                                                                                                                                                                                                                                                 489
                                                                                                                                                                                                                                                                                                                                                                                                   510
                                                                                                                                                                                                                                                                                                                                                                                                                     549
                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                       570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      696
 Example
```

9 % g

\$ B

g

ò

g

6 6 6 6 6 6 6

ò

m

g

6 6 6

g

õ

9 9 9 9

oy Oy

g &

8 & B

P P

S 6

g

2 4 2 4

ò

```
1426
                                                                                                 1186
                                                                                                                                                                                                                                ACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATT
                                                                                                                                                                                                                                                             GGCAGCTCGGGAGGCAGTGGATTCTGTGTGTCAGAGCCAACGGCCTCTACCCCGTGGCA
                                                                                                                                                                                                                                                                                                  AATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAG
                                                                                                                                                                                                                                                                                                           GGTGCCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCCTATGCCAAGGAGTCTGGGATCTGG
                    GCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCCCCT
                             ATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTCC
                                                                                                                                                                                                                      GAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         An isolated polynucleotide for treating diseases associated with its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; antianaemic; vulnerary; antiinflammatory; immunomodulator; antiinfertility; cerebroprotective; cytostatic; rheumatic; gene t neuroprotective; antiparkinsonian; protein therapy; EST; expressed sequence tag; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ē
                                                                                                                                                                                                                                                                                                                                      GCCGGGCTTGTCTTCGACACCAGCTGTGATGCTGCAACTGGGGCATAA 1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ren
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2hao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ľ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhang
RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO: 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asundi V,
, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel human coding sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                            BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhou P, Asu
Wehrman T,
                                                                                                                                                                                                                                                                                                                                                                                                            CDNA; 1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001WO-US26015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-SEP-2000; 2000US-0659671
                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-292408/33
                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu C,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; ABB97580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200222660-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-SEP-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-MAR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2002
                   1007
                                                          1067
                                                                                                 1127
                                                                                                                                       1187
                                                                                                                                                          1021
                                                                                                                                                                              1247
                                                                                                                                                                                                  1081
                                                                                                                                                                                                                     1307
                                                                                                                                                                                                                                        1141
                                                                                                                                                                                                                                                            1367
                                                                                                                                                                                                                                                                             1201
                                                                                                                                                                                                                                                                                                 1427
                                                                                                                                                                                                                                                                                                                    1261
                                                                                                                                                                                                                                                                                                                                       1487
                                                                                                                                                                                                                                                                                                                                                          1321
                                       841
                                                                             901
                                                                                                                    961
                                                                                                                                                                                                                                                                                                                                                                                                            ABN59993
                                                                                                                                                                                                                                                                                                                                                                                                                               ABN5993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kue AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                   ABN5999
                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                     g
                                                                                                                                                                                           a
                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                  g
Q
                                                                        원
                                                                                            ò
                                                                                                                g &
                                                                                                                                                                             à
                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                              286
                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                    346
                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                          406
                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                 466
                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                        526
                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                             586
                                                                                                                                                                                                                                                                                                                                                                                                                                      646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        946
                                                                                                                                                                                                          9
                                                                  The present invention provides the sequence of a protein which can be used in the treatment and prevention of infectious diseases. Inhibitors of the protein can be used to treat bronchial asthma and chronic occlusive pulmonary disease. The present sequence is an oligonucleotide described in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGGGG
                                                                                                                                                                                                                                                                  CAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAAT
                                                                                                                                                                                                                                                                                                                    TCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTGCCCCCACCTCGGGCCTGGTCCTGGGGCCCTATGCCAAGGAGTCTGGGATCTGG
                                                                                                                                                                                                                                                                                                        GGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTC
                                                                                                                                                                                                                                                                                                                                                 GGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGGAGAGACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGAATT
                    treatment of bronchial asthma,
                                                                                                                                                 Length 1368;
                                                                                                                                                                     ö
                                                                                                                            Sequence 1368 BP; 324 A; 398 C; 349 G; 297 T; 0 other;
                             infectious disease
                                                                                                                                                DB 22;
                                                                                                                                                                   1;
                                                                                                                                               Score 1366.4; Pred. No. 0; 0; Mismatches
                  and DNA for
disease and
                                              Claim 5; Page 100; 114pp; Japanese
                                                                                                                                                                   ;
0
                                                                                                                                               84.1%;
ilarity 99.9%;
Conservative
                  cins, peptides occlusive lung
WPI; 2001-397791/42
                                                                                                                                                         Best Local Similarity
Matches 1367; Conserv
                 New proteins,
chronic occlus
                                                                                                                                                                                       167
                                                                                                                                                                                                                             227
                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                               401
                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                      467
                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                            527
                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             947
                                                                                                                                                 Match
                                                                                                                                                 Query
```

904

1238

964

1298

1024

1358

1084

1418

1478

1204

```
CCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGA
             TCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCATGG
                                                                    TAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGATGCAAGTTGCACGGCTCCAGCTC
                                                                                                              GCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCTACC
                                                                                                                                                                                                                                                                                          TCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCC
                                                                                                                                                                                         GCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCTACC
                                                                                                                                                                                                                                    CCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGGAGA
                                                                                                                                                                                                                                                                               ACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCT
                                                                                                                                                                                                                                                                                                                         GACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTTTGCTTAGGACATGTTGCCCTACC
                                                                                                                                                                                                                                                                                                                                    protein which can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New proteins, peptides and DNA for treatment of bronchial asthma, chronic occlusive lung disease and infectious disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      infection; chronic occlusive pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disease treatment related oligonucleotide SEQ ID NO: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention provides the sequence
                                                                                                                                                                                                                                                                                                                                                                   Page 106; 114pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH42023 standard; DNA; 1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000WO-JP08015.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99JP-0324467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Morita S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-397791/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bronchial asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200136633-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nakanishi A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAY-2001
            1119
                                                       1179
                                                                                                  1239
                                                                                                                                                                                                              1085
                                                                                                                                                                                                                                   1419
                                                                                                                                                                                                                                                        1145
                                                                                                                                                                                                                                                                               1479
                                                                                                                                                                                                                                                                                                                         1539
                                                                                                                                                                                                                                                                                                                                               1265
                                 845
                                                                           905
                                                                                                                        965
                                                                                                                                                                                        1359
                                                                                                                                                                                                                                                                                                    1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAH42023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAH4 2023
                            g
                                                                                             à
                                                                                                                                                               g
                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                     g
                                                     οy
                                                                         g
                                                                                                                      g
                                                                                                                                             õ
                                                                                                                                                                                       ò
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGG: 1058
                                                                                                                                                                                                                                                                                         458
                                                                                                                                                                                                                                                                                                                                                                                                    304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            966
                                                                                                                                                                                                                                             398
                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                   518
                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                              578
                                                                                                                                                                                                                                                                                                                                                                                                                          638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     878
                                       The present invention provides the protein and coding sequences of 444 novel human proteins. These were isolated from expressed sequences tags (ESTS). They can be used to stimulate cell growth, to regulate haematopolesis e.g. to treat aplastic anaemia, to help tissue regrowth e.g. in burn treatment, to regulate the immune system e.g. to treat multiple sclerosis, to regulate activin or inhibin e.g. to treat infertility, to regulate haemostasis or thrombolysis.e.g. to treat stroke and cancer, to screen for drugs, to treat inflammatory conditions e.g. rheumatoid arthritis, and to treat nervous system disorders e.g. harkingon's disease. The present sequence is a coding sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                            CTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCT
                                                                                                                                                                                                                                                        GGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTT
                                                                                                                                                                                                                                                                                                 TCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                             GGGAGTACCCTGGCTCTCGTGGCAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                        TGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGCCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGGACTGACACGGCAGCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCICATCGTIGGATICCCTACCTAIGGACACAACTICATCCIGAGCAACCCCTCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCCTATGCCAAGGAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                 DB 24; Length 1369;
                                                                                                                                                                                                                        ö
polypeptide such as cancer and multiple sclerosis
                                                                                                                                                                                                                      Indels
                                                                                                                                                                          Sequence 1369 BP; 327 A; 393 C; 341 G; 308 T; 0 other;
                                                                                                                                                                                                                      13;
                                                                                                                                                                                                Score 1266.2;
Pred. No. 0;
0; Mismatches
                      NO 404; 509pp; English,
                                                                                                                                                                                               Query Match
Best Local Similarity 99.0%;
Matches 1274; Conservative
                      G
                                                                                                                                                       invention
                                                                                                                                                                                                                                            339
                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                            125
                                                                                                                                                                                                                                                                                                                                  459
                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                            519
                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                                                                                                        579
                                                                                                                                                                                                                                                                                                                                                                                                                                            305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  425
                      Claim 1;
                                                                                                                                                                                                                                                                                       399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1059
encoded
ð
                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

å

δ g à

õ

ò

ò

ò g ò g ò ď ò q ò þe

Db 906 CTCCTGGCTTACTATGAGCTTTCTGAATGAAGGAGCCACTGAGGTCTGGGAT 965 Qy 1061 GCCCCTAGGAAGTGCCTTATGCCTATCAGGCAATGTGGGTTGGCTATGACAACAT 1120	RESULT 5 AAK88635 ID AAK88635 XX AC AAK88635; XX AC AAK88635; XX DT 05-NOV-2001 (first entry) XX DF Human digestive system antigen coding sequence SEQ ID NO: 951. XX	WO200155314- 02-AUG-2001. 17-JAN-2001; 31-JAN-2000; 04-FEB-2000; 24-FEB-2000; 16-WAR-2000; 17-WAR-2000; 17-WAR-2000; 17-WAR-2000; 17-WAR-2000; 17-WAR-2000; 17-WAR-2000; 18-APR-2000; 19-AWY-2000; 28-JUN-2000;	PR 30-JUN-2000; 2000US-0215135. PR 30-JUN-2000; 2000US-0216847. PR 11-JUL-2000; 2000US-0216847. PR 11-JUL-2000; 2000US-0217487. PR 11-JUL-2000; 2000US-0217487. PR 11-JUL-2000; 2000US-0218296. PR 14-JUL-2000; 2000US-0220963. PR 26-JUL-2000; 2000US-0220964. PR 14-AUG-2000; 2000US-0224519. PR 14-AUG-2000; 2000US-0225213. PR 14-AUG-2000; 2000US-0225266. PR 14-AUG-2000; 2000US-0225276. PR 14-AUG-2000; 2000US-0225477. PR 14-AUG-2000; 2000US-0225477. PR 14-AUG-2000; 2000US-0225758. PR 14-AUG-2000; 2000US-0225759. PR 18-AUG-2000; 2000US-0225759.
CC used in the treatment and prevention of infectious diseases. Inhibitors CC of the protein can be used to treat bronchial asthma and chronic CC occlusive pulmonary disease. The present sequence is an oligonucleotide CC described in the exemplification of the invention. XX SQ Sequence 1469 BP; 406 A; 331 C; 332 G; 400 T; 0 other; Query Match 43.2%; Score 701.8; DB 22; Length 1469; Best Local Similarity 74.3%; Pred. No. 138-188; Matches 886; Conservative 0; Mismatches 307; Indels 0; Gaps 0; AN ACCATGACAAAGCTTATTCTCCACAGGTCTGTCCTTATACTGAATTTGCAGCTGGC 160	221 GGCTTCATGCCTGACACACCTGCTCTGCTACCCACTGATCTAGGCTTTGCT 280	461 ATCACCTCAGTCAATTCCTGCGCCAGTATGACTTGACGGGCTGGACTTTGACTGG	11 1 1 1 1 1 1 1 1

```
0000US-0244617
                                                                                                                                                                                                                                                                                                                                               000US-0246523
                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0249207
22-AUG-2000;
22-AUG-2000;
30-AUG-2000;
01-SEP-2000;
01-SEP-2000;
01-SEP-2000;
05-SEP-2000;
06-SEP-2000;
06-SEP-2000;
08-SEP-2000;
14-SEP-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
                                                                                                                                                                                                                                                                                      20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
20-0CT-2000;
                                                                                                                                                                                                                                                                                                             01-NOV-2000)
08-NOV-2000)
                                                                                                                                                                                                               29-SEP-2000;
29-SEP-2000;
02-OCT-2000;
                                                                                                                                                                                                                                                02-OCT-2000;
13-OCT-2000;
                                                                                                                                                                                                     29-SEP-2
                                                                                                                                                                                                           29-SEP-2
                                                                                                                                                                                                                                                            13-OCT-2
```

```
The present invention provides the protein and coding sequences of a number of human digestive system antigens. These can be used in the diagnosis, treatment and prevention of digestive system disorders, including cancer, Meckel's diverticulum, bacterial or parasitic infections, appendicitis, Hirschsprung's disease, chronic colitis or ulcerative colitis. The present sequence is a cDNA encoding a digestive system antigen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1070 GAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACAACATCAAGAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                151 GAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACAACATCAAGAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   950 GCCCCCACCTCTGGTGCTGGTGCTGGTGGCCCTATGCCAAGGAGTCTGGGATCTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1010 TACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polynucleotides encoding digestive system antigens; useful for diagnosing, treating, preventing and/or prognozing disorders of digestive system, particularly cancer and cancer metastases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22; Length 746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 746 BP; 203 A; 193 C; 189 G; 156 T; 5 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 629.2; DB 22
Pred. No. 3.8e-168;
5; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID NO 951; 986pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38.7%; 95.1%; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0251030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001US-0259678
                                                                                                                                                                                       2000US-0249215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20000S-0251988
                                                                                                                                                                                                                                                                                                      2000US-0249244
                                                                                                                                                                                                                                                                                                                                                          2000US-0249264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best_Local Similarity 95.1
Matches 643; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosen CA, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-502630/55.
P-PSDB; AAM92862.
                                                                       17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-DEC-2000)
01-DEC-2000)
05-DEC-2000)
05-DEC-2000)
06-DEC-2000)
08-DEC-2000)
08-DEC-2000)
                                                                                                                                                                                                                                                                                                                                                                              17 - NOV - 2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JAN-2001;
                                                                                                                                                                                                                                             17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                   17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                          17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
PARAMANA PAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
```

90

ö

1129

210

1189

GATATTAAGGCTCAATGGCTTAAGCACAAATTTGGAGGCGCCATGGTCTGGGCCATT

```
WPI; 2002-257592/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 629; Conserv
                                                                                                  Ni J,
                                                                                                                              P-PSDB; AAU77733
 WO200214341-A1
                    21-FEB-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 9
                                                                                                  Barash
 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ζ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                 1369
                                                          CTGAAGAAGGCCCTCGCCTGCAGAGTGCAAGTTGCACGCTCCAGCTCAGCCCCATTGAG 1309
                                                                                                                                        AGCTCGGGAGGCAGTGGATTCTGTGTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAAT 1429
                                                                                                                                                                               1430 AACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCC 1489
                                                                                                                                                                                                                      GGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCTGACCTGGTCTA 1549
                                                                                                                                                                                                                                                             TATTCCCTAGAGITCCAGICICITITGCTTAGGACAIGTIGCCCCTACCTAAAGICCTGC 1609
                                                                                                                                                                                                                                 GATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCATT 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Secreted protein; gene therapy; immunostimulant; human; stroke; immune system disorder; immunologic deficiency syndrome; anaemia; ataxia telangiectasia; HIV; human immunodeficiancy virus; heart attack; wiskott-aldrich disorder; thyrombocytopenia; scaring; erythematosus; autoimmune disease; Addison's disease; encephalomyelitis; lupus; multiple sclerosis; autoimmune thyrodidiis; diabetes; inflammation; mephritis; ischemia; hypergammaglobulinaemia; Crohn's disease; sarcoidosis; Gaucher's disease; cacidiovascular disease; telangiectasia; persistent truncus arterious; arrhythmias; angina pectoris; tumour; myccardial infarction; hypertension; neovascularisation; anglogensis;
                                                                                                 cancer; ocular anglogenic disease; hyperproliferative disorder; diabetic retinopathy; uveltis; rheumatoid arthritis; psoriasis; wound healing; endometriosis; vasculogenesis; atherosclerosis; nervous system disease; Parkinson's disease; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= c
/label= mature_human_secreted_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Novel secreted protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding novel human secreted protein #5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                    1610 AATAAAATCAGCAGTC 1625
                                                                                                                                                                                                                                                                                                             AATAAAATCAGCAGTC 706
                                                                                                                                                                                                                                                                                                                                                                        ABK11713 standard; cDNA; 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infectious disease; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product- 181..183
                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184..537
                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mat_peptide
                                                                                                                                       1370
                                                                                                                                                                                                                      1490
                                                                                                                                                                                                                                                             1550
                                                                                                                                                                                                                                                                                                                                                                                            ABK11713;
211
                  1190
                                                          1250
                                                                                                 1310
                                                                                                                   391
                                                                                                                                                           451
                                                                                                                                                                                                   211
                                                                                                                                                                                                                                                                                                                       691
                                                                                                                                                                                                                                                                                                                                                             RESULT 6
                                     셤
                                                                          셤
                                                                                                à
                                                                                                                   g
                                                                                                                                       à
                                                                                                                                                        Q
                                                                                                                                                                              ò
                                                                                                                                                                                                 셤
                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                     셤
용
                  ò
                                                          õ
```

```
The invention describes eight novel human secreted polypeptides (I). (I)
and the polynucleotides encoding them are useful for treating, disorders,
including disorders of immune system e.g. immunologic deficiency
syndrome, ataxia telangiectasia, HTV infection (human immunodeficiency
virus), Wiskott-Aldrich disorder, anaemia, thyrombocytopenia, heart
crattacks (infarction), strokes, or scarring; autoimmune diseases e.g.
Addison's disease, encephalomyelitis, multiple sclerosis, autoimmune
thyroiditis, lupus, erythematosus, insulin dependent diabetes mellitis;
cradiovascular disease e.g. nephritis, ischemia-reperfusion injury,
hypergammaglobulinaemia, Crohn's disease, sarcoidosis, Gaucher's disease,
cardiovascular disease e.g. cardiovascular abnormalities, persistent
truncus arteriosus, arrhythmias, angina pectoris, mycoradial infarction,
hypertension, telangiectasia, ischemia includes cerebral ischemia,
mucocutaneous lymph node syndrome; disorders and/or conditions associated
tumours, ocular angiogenic diseases, hypercoliferative disorders,
diabetic retinopathy, uveitis, rheumatoid arthritis, psoriasis, delayed
condinentials and infectious diseases. This sequence encodes a
Alzheimer's disease and infectious diseases. This sequence encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1056 GGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACA 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1116 ACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCA 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            996 CTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGAT 1055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1176 TGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGCCAAGTTTC 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1236 CCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAG 1295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1296 CTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTA 1355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 GGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 CTGGGATCTGGGCTTACTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242 CCCTAATCTCCACCCTGAAGAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                               Novel human secreted proteins useful for treating immune system e.g. anaemia, cardiovascular e.g. myocardial infarction, neurological disorders e.g. Alzheimer's disease, Parkinson's disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          novel human secreted protein, described in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 638 BP; 153 A; 171 C; 169 G; 145 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 628.4; DB 24;
Pred. No. 5.9e-168;
0; Mismatches 1;
                                                                                                                                                                                                                               ₹;
                                                                                                                                                                                                                               Shi
                                                                                                                                                                                                                               Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 322; 337pp; English.
                                                                                                                                                                                                                               Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           38.7%;
                                                                                                                                                    (HUMA-) HUMAN GENOME SCI INC
13-AUG-2001; 2001WO-US25288
                                                                          14-AUG-2000; 2000US-225215P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
```

ö

÷,

99

Sun

8

à

g

ò

g

à g ò g

ò

```
or cells expressing them or to generate transgenic ('Knockout') rodents. It can also be used in hybridisation assays and to detect genetic alterations in the chitinase gene related to disease. Agents that inhibit this protein may be useful in treatment of Gaucher's disease and rheumatoid arthritis, where overexpression of the protein can damage antifungal agents and may allow a reduction in the dose of such agents, and thus of their side effects.
                                                                                                                                                                              143
                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                                                        263
                                                                                                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                           306
                                                                                                                                                                                                                                                                                                                                                                                                                  443
                                                                                                                                                                                                                                                                                                                                                                                                                                        366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               983
                                                                                                                                                                                                                                                                                                                                   84 GACTGGTGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC
                                                                                                                                                                                                                                        264 IGAICTACGCCTITGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGAIG
                                                                                                                                                                                                                                                                                                                                                                                           247 AGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGGAATCCCAAGCTGAAGACCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                  TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAACCGTCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGCGCAAATACAGCTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTTCACTGTCCTGGTGCAGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCCAGT
                                                                                                                                                                                                                                                                          ACAAGCCCAGGCTGATGGTCACTGCTGCTGCTGCTGGTGGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547 GGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATGGCTCCTGGGAGGCCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCATGGCTCTTGGGAGAAGGTCACGGGACATAACAGCCCCCCTCTACAAGAGGCAAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGTGGTGCAGCAGCCTCAACGTGGATGCTGCTGTGCAACAGTGGCTGCAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCCT
                                                                                                                                                       Gaps
                                                                                                                                                       30;
                                                                                                                                Length 1656;
                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0 other;
                                                                                                                              Score 483; DB 19;
Pred. No. 1.8e-126;
0; Mismatches 545;
                                                                                                                                29.78;
                                                                                                                                           al Similarity 60.2
870; Conservative
                                                                                                                                                                                                                             144
                                                                                                                                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                                                                                  384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            299
                                                                                                                                                                                                                                                                                                127
                                                                                                                                                                                                                                                                                                                                                                     324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             607
                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       787
                                                                                                                                            Local
                                                                                                                                                       Matches
  8
                                                                                                                                                                                                                           õ
                                                                                                                                                                              ö
                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
  1415
                                             1475
                                                                                                                                           1595
                                                                                           421
                                                                      481
                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence encodes a hovel human chitinase isolated from clone MO-13B. Chitinases are useful for treating or preventing fungal infection and as immunogens for generating antibodies which are used to purify, detect and quantify chitinases, e.g. for diagnosis of Gaucher's disease. The nucleic acid sequence of the chitinase is also useful as a probe to identify and isolate genomic DNA encoding chitinases or similar proteins,
                                                                                                                                        CCTGACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTTGCTTAGGACATGTTGCCCT
 GCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCT
            ACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGC
                                                           Chitinase; human; fungal infection; immunogen; diagnosis; treatment; Gaucher's disease; transgenic; detection; hybridisation; antifungal; rheumatoid arthritis; overexpression; extracellular matrix; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding human chitinase - useful as antifungal agents, especially in combination with other antifungals
                                                                                                                                                                                      Location/Qualiflers
27..1427
4*tag= a
27..89
/*tag= b
90..1424
/*tag= c/product= chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 9; Page 42-44; 63pp; English.
                                                                                                                                                                                                                                                                                                                                            Human chitinase clone MO-13B cDNA.
                                                                                                                                                                                                                                                                        BP,
                                                                                                                                                                                                                                                                       1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-US10460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96US-0663618
                                                                                                                                                                                                                                                                      AAV10436 standard; cDNA;
                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-052316/05.
P-PSDB; AAW40260.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORP
                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ICOS-) ICOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9747752-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-JUN-1996;
                                                                                                                                                                                                                                                                                                                   15-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-DEC-1997
1356 (
                                             1416
                                                                   422
                                                                                           1476
                                                                                                                  482
                                                                                                                                         1536
                                                                                                                                                                                                                                                                                             AAV10436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gray PW;
                                                                                                                                                                                                                                              AAV10436
ID AAV1
                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
```

```
444 AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAX42426
           12-MAR-1999;
                                              (ICOS-) ICOS
                            12-MAR-1998;
                                                              Gray PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  367
                                                                                                                                                                                                                                                                                                                                                                                                                                                        67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               247
    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                     1020
                                                                                                                                                          1283
                                                                                      1163
                                                                                               ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAG 1043
                                                                                                                                        TGGGCGGGGCCATGGTCTGGGCACTGGACTTAGATGACTTTGCCGGCTTCTCCTGCAACC 1140
                                                                                                                                                                                         1284 GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG 1343
                                                                                                                                                                                                                                      1404 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG 1463
                                                                                                                                                                                                                                                                                              1464 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA 1523
                                                                                                                                                                                                                                                                                                       1344 GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG 1403
                                                                                                                                                                                                                                                                               1297 CTGATGGGCTCTATCCCAATCCTCGGGAACGGTCCAGCTTCTACAGCTGTGCAGCGGGGC 1356
CCTCCTCATCAGACACCAGAGTGGGGGCCCCAGCCACAGGGTCTGGCACTCCAGGCCCCT 906
                                  907 TCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCTCCT-----GGAAGGGGG
                                                   CCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG
                                                                   961 CCACCAAACAGAATCCAGGATCAGAAGGTGCCCTACATCTTCCGGGACAACCAGTGGG
                                                                                    TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAT
                                                                                                                       TTGGAGGCGCCATGGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                       1224 AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             chitin; fungal infection; immunocompromised; AIDS; chemotherapy; organ transplant; parasite; chitin-binding; allele; vector; truncated protein; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                            MO-13B clone of human Chitinase, with noncoding 5'/3' regions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product- Human_Chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90..1427
/*tag c
/note= "Mature peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= b
/note= "Signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 27..1427
                                                                                                                                                                                                                                                                                                                                                                                           AAZ21848 standard; DNA; 1656 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                            10-DEC-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
                                                                                                                                                                                                                                                                                                                                1524 ACTGG 1528
                                                                                                                                                                                                                                                                                                                                                1417 CCTGG 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W09946390-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mat_peptide
                                                   044
                                                                                                                      1164
                                                                                                                                       1081
                  984
                                                                                    1104
                                                                                                                                                                                                                                            1256
                                                                                                                                                                                                                                                                                                                                                                                                            AAZ21848;
                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                                                                                                                                                            g
                                g
                                                                g
                                                                                   ö
                                                                                                   g
                                                                                                                                   g
                                                                                                                                                      ò
                                                                                                                                                                    g
                                                                                                                                                                                    δ
                                                                                                                                                                                                        g
                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                             g
                  à
                                                  ò
                                                                                                                ð
                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                              g
```

```
chitinase enzyme, which is capable of degrading Chitin (a linear chitinase enzyme, which is capable of degrading Chitin (a linear chitinase enzyme, which is capable of degrading Chitin (a linear chitinase fragments can be used to screen for proteins or other molecules that specifically bind to the chitin-binding domain of human chitinase or that modulate its activity. These compounds are useful for munuization, as well as for purifying chitinase, as well as for detection and quantification of Chitinase. Polynucleotide fragments of detection are useful as a source of probes and primers, and to express the proteins recombinantly. The chitinase fragments, when conjugated to antifungal compounds, are used to treat animals, especially humans, infected with chitin-containing parasites such as fungil. Fungal infection treated include candidiasis, aspecyallosis, cocidioidomycosis, blastomycosis, paracoccidioidomycosis, blastomycosis, paracoccidioidomycosis, blastomycosis, paracoccidioidomycosis, chitin can be degraded by the enzyme chitinase. Use of whole chitinase protein for treating infections, especially fungal infections, is problematic. In view of the ancreasing incidents of life-threatening containing in edgradioidomycomycomised individuals, there exists a need for identifying new compounds for treating fungal infection. The chitin-binding fragments of the present invention provide this need.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                                                                                        Novel chitin-binding fragments of human chitinase used to treat fungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 GACTGGTGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 GCCTGCCGCTGAGCTGCATCATGGTGCGGCTCTGTGGCGCAGGTTTCATGGTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               144 TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGCCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATGATCCCATGGGGCTCTGCTGCAAACTGGTCTGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGCCAAGCTGAAGCTGAAGCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match 29.7%; Score 483; DB 20; Length 16 Best Local Similarity 60.2%; Pred. No. 1.8e-126; Matches 870; Conservative 0; Mismatches 545; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 59-62; 83pp; English.
99WO-US05343,
                                                                        98US-0039198
                                                                                                                                                                                                                                                                                                                                                                                                                                               infections in animals
                                                                                                                                                                                                                     Tjoelker LW
                                                                                                                                                                                                                                                                                          WPI; 1999-551417/46.
```

'n

426

BP.

CDNA; 1656

AAD03760 standard;

Jul

Sun

```
RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                         1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1356
                                                                                                                                                                                                                                                                                                                                                                                         ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAG 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGCCCTCGGGCCTGCAGAGTGCAAGTT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA-- 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACGTACCAGCAGCAGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960
                      GCCTTGACCTTGACTGGGAGTACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGC 486
                                               623
                                                                       546
                                                                                                 683
                                                                                                                       909
                                                                                                                                               743
                                                                                                                                                                      999
                                                                                                                                                                                              803
                                                                                                                                                                                                         863
                                                                                                                                                                                                                                                                     786
                                                                                                                                                                                                                                                                                          GAGCACCAGCTGAGAAGCTCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGA 923
                                                                                                                                                                                                                                                                                                                   846
                                                                                                                                                                                                                                                                                                                                           983
                                                                                                                                                                                                                                                                                                                                                                  906
                                                           GGCTGGACTTTGACTGGGAGTACCCTGGCTCTGGGAGGCCCTCCTCAGGACAAGCATC
                                                                                                                                                            AGAGTGGTGCAGCCAGCCTCAACGTGGATGCTGCTGTGCAACAGTGGCTGCAGAAGG
                                             TCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                             624 ACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTG
                                                                                                                      GGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTG
                                                                                                                                              GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                                                                                             TCCATGGCTCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTG
                                                                                                                                                                                                                                             ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                         GGACCCTGCCAGCAGGTGATCCTTGGCATGCCTACCTACGGACGCTCCTTCACAGG
                                                                                                                                                                                                                                                                                                                                         GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGGTCCT
                                                                                                                                                                                                                                                                                                                                                                847 CCTCCTCATCAGACACCAGAGTGGGGGCCCCCAGGCGACAGGGTCTGGCACTCCAGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                       CCACTCAGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGGAGGCCCCATGGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --TGGCCCCAGCCCTGGACAGACACGTTCTGCCAGGGCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1404 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGATGGGCTCTATCCCAATCCTCGGGAACGGTCCAGCTTCTACAGCTGTGCAGCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGG 1421
                     127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1344
504
                                             564
                                                                                                                      547
                                                                                                                                              684
                                                                                                                                                                     607
                                                                                                                                                                                             744
                                                                                                                                                                                                                    299
                                                                                                                                                                                                                                          804
                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                          864
                                                                                                                                                                                                                                                                                                                 787
                                                                                                                                                                                                                                                                                                                                         924
                                                                                                                                                                                                                                                                                                                                                                                                                907
                                                                                                                                                                                                                                                                                                                                                                                                                                        1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1417
                     g
                                                                 g
                                                                                             ò
                                                                                                                     g
                                                                                                                                                                 g
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                           qq
å
                                             ò
                                                                                                                                             à
                                                                                                                                                                                             ö
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

```
÷,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        product, comprising a human chilinase fused to at least a portion of an immunoglobulin chain. The fusion product is useful for treating fungal infections (mycoses) such as candidiasis, aspergillosis, blastomycosis, coccidioidomycosis, paracoccidioidomycosis, histoplasmosis, mucormycosis, cryptococcosis, chromoblastomycosis, sporotrichosis and dermatophycoses antifungal agent needed to exert an antifungal activity. The fusion protein is useful for reducing the amount of non-chilinase antifungal agent repeated to exert an antifungal activity. The fusion protein is also useful for preparing a medicament for the prophylactic or therapeutic treatment of fungal infections. Chilinase immunoglobulin fusion product has unexpectedly improved serum half-life and formulation properties. The present sequence is human chilinase cDNA from clone pWO-13B. Chilinase enzyme degrades chiltin which is a homopolymer of beta-(1,4)-linked N-acetylglucosamine residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chitinase immunoglobulin fusion product, useful for treating I infections and reducing the amount of a non-chitinase antifungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention relates to a chitinase immunoglobulin (Ig) fusion
                                                                                           Human; antifungal; chitinase; immunoglobulin; Ig; therapy; fungal infection; candidiaals; aspergillosis; coccidiotidomycosis; blastomycosis; paracoccidiolomycosis; histoplasmosis; cryptococcosis; chromoblastomycosis; sporotrichosis; mucormycosis; dermatophytoses;
                                                                                                                                                                                                                                                                                                                                              "Human mature chitinase from clone pMO-13B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                   "Human chitinase from clone pMO-13B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Steiner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 483; DB 22;
Pred. No. 1.8e-126;
0; Mismatches 545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shaw KD,
                                                              Human chitinase cDNA from clone pMO-13B
                                                                                                                                                                                                                      Location/Qualifiers
27..1427
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2; Page 34-36; 39pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agent needed for the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29.7%;
60.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                            2000WO-US26960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0409918
                             (first entry)
                                                                                                                                                                                                                                                                   /product-
                                                                                                                                                                                                                                                                                                                                                /product=
                                                                                                                                                                                                                                                                                                  /*tag= b
90..1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                    . . 89
                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dietsch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-266141/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
es 870; Conserv
                                                                                                                                                       clone pMO-13B; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ICOS-) ICOS CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAE00433
                                                                                                                                                                                                                                                                                                                                                                            WO200123430-A2
                                                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                            28-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-1999;
                             19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Allison DS,
                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                 mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                             05-APR-2001
AAD03760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                          Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The
```

84 GACTGGTGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC 143

```
1403
          1283
                                                                                                                         1463
                                                                                                                                    GGCTGTTCCAGCAAAGCTGCCCGACAGGCCTGGTGTTCAGCAACTCCTGCAAATGCTGCA
          AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTCCAAGTT
                    CAGGCACCCCAG - - - AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA - -
                                                                                                   --------TGGCCCCAGCCTGAAGACACGTTCTGCCAGGCCAAAG
                                                                                                                                                              TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Co-administering chitinase to improve the effectiveness of fungicidal drugs e.g. amphotericin B or itraconazole, useful for treating fungal infections e.g. candidiasis, coccidioidomycosis and blastomycosis
                                               GCACGCCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG
                                                                                    CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG
                                                                                                                                                                                                                                                                                                                                         Continuase; enzyme; human; fungicide; antifungal; infection; candidiasis; aspergillosis; coccidioidomycosis; blastomycosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis; chromoblastomycosis; sporotrichosis; mucormycosis; dermatophytosis; Pneumocystis; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Column 31-34; 26pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Chitinase"
                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
27..1427
/*tag= a
                                                                                                                                                                                                                                                                                                                              Human chitinase cDNA clone MO-13B.
                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                       CDNA; 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0877599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-0663618
                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= a /*tag= 27..89 /*tag= b 90..1424 /*tag= c
                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-442449/47.
P-PSDB; ABB76292.
                                                                                                                                                                                                   ACTGG 1528
                                                                                                                                                                                                                      CCTGG 1421
                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ICOS-) ICOS
                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US6372212-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-JUN-1996;
                                                                                                                                                                                                                                                                                                           12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-APR-2002
                            1141
                                                                                   1344
                                                                                                                                            1297
                                                                                                                                                              1464
                                                                                                                                                                                1357
                                                                                                                                                                                                                      1417
          1224
                                                                 1201
                                                                                                       1256
                                                                                                                         1404
                                                                                                                                                                                                                                                                      ABL57381
                                                                                                                                                                                                                                                                                         ABL57381;
                                               1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gray PW;
                                                                                                                                                                                                                                                     RESULT 10
                                                                                                                                                                                                                                                               ABL5738
                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                셤
                                                                                                                                                                                                                  g
                         g
                                               ò
                                                                  셤
                                                                                   Οy
                                                                                                                         ò
                                                                                                                                          셤
                                                                                                                                                              ò
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAG 1043
                                                                                                                                                                                                                                 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             906
                                     126
                                                        263
                                                                          186
                                                                                             323
                                                                                                                246
                                                                                                                                   383
                                                                                                                                           443
                                                                                                                                                                                  503
                                                                                                                                                                                                                                                    563
                                                                                                                                                                                                                                                                      486
                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                            546
                                                                                                                                                                                                                                                                                                                              683
                                                                                                                                                                                                                                                                                                                                                909
                                                                                                                                                                                                                                                                                                                                                                   743
                                                                                                                                                                                                                                                                                                                                                                                     999
                                                                                                                                                                                                                                                                                                                                                                                                        803
                                                                                                                                                                                                                                                                                                                                                                                                                           726
                                                                                                                                                                                                                                                                                                                                                                                                                                             863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                   203
 99
                                                                                                                                                                                                                         GGACCCTGCCAGCAGCAGATCCTTGGCATGCCTACCTACGGACGCTCCTTCACAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTCCTCATCAGACACCAGGCGCCCCAGCCACCACGGGTCTGGCACTCCAGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                        TCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                                                                                                                                                                                                                                                                          GATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCAACCTTATGGCCTACGACT
                                                                                                                                                                                                                                                                                                                                                                                                                  GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----GGAAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCACTCAGGGATGGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TIGGAGGCGCCATGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                   TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                             AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                    GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC
                                                                                                                                                                                                                                                                                                   GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                                                                                                                                                                                                                                                                                                        TCCATGGCTCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGCTTTGATGATGAGGAGCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGAC
GCCTGCCGCTGAGCTGCATCATGGTGCGGTCTGTGGCCTGGGCCAGGTTTCATGGTCCTGC
                              ACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTG
                  TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1081
                   144
                                     67
                                                                         127
                                                                                                                                                    247
                                                                                                                                                                       384
                                                                                                                                                                                          307
                                                                                                                                                                                                            444
                                                                                                                                                                                                                                367
                                                                                                                                                                                                                                                  504
                                                                                                                                                                                                                                                                    427
                                                                                                                                                                                                                                                                                        564
                                                                                                                                                                                                                                                                                                          487
                                                                                                                                                                                                                                                                                                                             624
                                                                                                                                                                                                                                                                                                                                               547
                                                                                                                                                                                                                                                                                                                                                                 684
                                                                                                                                                                                                                                                                                                                                                                                     607
                                                                                                                                                                                                                                                                                                                                                                                                       744
                                                                                                                                                                                                                                                                                                                                                                                                                          299
                                                                                                                                                                                                                                                                                                                                                                                                                                            804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                       204
                                                                                            264
                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ું લ
                                                                      g
                                                                                                            g
                                                                                                                            ö
                                                                                                                                               셤
                                                                                                                                                                     90 yo
                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                 ò
                                    g
                                                       õ
                                                                                          ò
```

```
AAT89181 standard; cDNA; 1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1524 ACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1417 CCTGG 1421
                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1297
                                                                                                                                                                                                        864
                                                                                                                                                                                                                                                                          924
                                                                                                                                                                                                                                                                                                                                                                                                              1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1256
 684
                                                                     744
                                                                                                   299
                                                                                                                                     804
                                                                                                                                                                       727
                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT89181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT89181
                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                       a
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                 g
                                                                     ò
                                                                                                   g
                                                                                                                                     ŏ
                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
          The present sequence is that of cDNA clone Mo-13B (ATCC 98078)

cencoding human chitinase (see ABB76292). The clone was isolated from a cDNA library prepared from peripheral blood monocyte derived macrophages using a probe based on human chitinase clone MO-218 (see ABE75380). The 2 clones contain a single nucleotide difference in the coding region, causing omino acid position 81 of the mature protein to be either series or alycine. Northern blots showed highest chitinase gene expression in lung is consistent with a protective role against pathogenic organisms that contain chitin. The invention provides to human chitinase products and materials and methods for the recombinant production of human chitinase products, which are expected to be useful as products for treating fungal chitianse has a synergistic effect on the actions of other fungicides. It can be administered to improve the antifungal activity of a non-chitinase antifungal agent, especially amphotericin such as candidiaals, aspergillosis, coccidicidenwoods, chroner chitians production such as candidiaals, aspergillosis, coccidicidenwoods, chroner characteristics of the correspondence of the characteristics of the correspondence of the characteristics of the correspondence of the characteristics of the chara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACTGGTGCTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   144 TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            247 AGACTCTCTACCAGGAGTTCAATGGCCTGAAGAGATGAATCCCAAGCTGAAGACCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAAGCCCAGGCTGATGGTCACTGCTGCAGTGCTGGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTGCCGCTGAGCTGCATCATGGTGCCGTTGTGGCCTTGGGCAGGTTTCATGGTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTGACCTTGACTGGGAGTACCCAGGAAGCCAGGGGGAGCCCTGCCGTAGACAAGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                        cryptococcosis, chromoblastomycosis, sporotrichosis, mucormycosis, dermatophytoses and Pneumocystis infections (all claimed). In particular, the fungal infection involves Candida, Aspergillus and/or Cryptococcus spp., whose growth is not effectively inhibited by contact with human chitinase alone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1656 BP; 365 A; | 497 C; 447 G; 347 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.7%; Score 483; DB 24; 160.2%; Pred. No. 1.8e-126; 1ive 0; Mismatches 545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best_Local Similarity 60.2
Matches 870; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              427
ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803
                                                                                                                                       726
                                                                                                                                                                                       863
                                                                                                                                                                                                                                      786
                                                                                                                                                                                                                                                                                      923
                                                                                                                                                                                                                                                                                                                  983
                                                                                                                                                                                                                                                                                                                                                                                                                                906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            907 TCACCAAGGAAGGAGGGATGCTGGCTACTATGAAGTCTGCTCCT----GGAAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                      GAGCACCAGCTGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                984 ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGGACAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1284 GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1344 GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1404 CCAACGCCTCTACCCCGTGCCAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG
                                             GATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCAACCTTATGGCCTACGACT
                                                                                            TCCATGGCTCCTGGGAGGCTACACTGGAGAACAGCCCCCCTCTACAAATACCCGACTG
                                                                                                                                                                                         ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                                                                                                      GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                847 CCTCCTCATCAGACACCAGAGTGGGGGCCCCAGCCACAGGGTCTGGCACTCCAGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGGAGGCGCCATGGTCTGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGGCAAGTTTCCCCTAATCTCCACCTGAAGAAGGCCCTCGGCCTGCAGATGCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1141 AGGGCCGATACCCCCTCATCCAGACGCTACGGCAGGAACTGAGTCTTCCATACTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGATGGGCTCTATCCCAATCCTCGGGAACGGTCCAGCTTCTACAGCTGTGCAGCGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1464 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chitotriosidase; tissue remodelling disorder; rheumatoid arthritis; atherosclerosis; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human chitotriosidase variant cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP
```

```
1352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCA 1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAA 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGGCCTGCAGAGGTGCAAGTTGCACGGC 1290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1291 TCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGG 1350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1411 CCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTA 1470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTA 1110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGG 1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1245 ATACCCCCTCATCCAGACGCTACGGCAGGAACTGAGTCTTCCATACTTGCCTTCAGGCAC 1304
                                                                                                                                                                                                              710
                                                                                                                                                                                                                                                                                            810
                                                                                                                                                                                                                                                                                                                       830
                                                                                                                                                                                                                                                                                                                                                                                                    930
                                                                                                                                                                                                                                                                                                                                                                                                                                                       990
                                                                                                                                                                                                                                                                                                                                                                                                                              950
                                                                                                    590
                                                                                                                                630
                                                                                                                                                         650
                                                                                                                                                                                   9
                                                                                                                                                                                                                                        750
                                                                                                                                                                                                                                                                 770
                                                                                                                                                                                                                                                                                                                                                 870
                                                                                                                                                                                                                                                                                                                                                                          890
CGGAGGCTGGAATTTCRGCACTCAGAAGTTCACAGATATGGTAGCCACGGCCAACAACAACCG 470
                                                                             570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1461 CCAGCAAAGCTGCCCGACAGGCCTGGTGTTCAGCAACTCCTGCAAATGCTGCACCTGG 1518
                                                                                         GATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGG
                                                                                                                                                                                                                                                       CTCCTGGGAGGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGG
                                                                                                                                                                                                                                                                                                            871 AGCIGAGAAGCICAICGIIGGAIICCCIACCIAIGGACACAACTICAICCIGAGCAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGCTGGGCCCTATGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1351 GAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGCGCAAATACAGCTTTGACGGCCTTGA
                                                                                                                                  811 CAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACC
                                                                                                                                                                                                                                                                                                                                                                          831 TGCAGCAGCCTCAACGTGGATGCTGCTGTGCAACAGTGGCTGCAGAAGGGGACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGA
                          CCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGA
                                                                             CTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCCAGGACAAGCATCTCTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1231
                                                   471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1471
                          121
                                                                             511
                                                                                                       531
                                                                                                                                571
                                                                                                                                                                                                                                         691
                                                                                                                                                                                                                                                                    711
                                                                                                                                                                                                                                                                                            751
                                                                                                                                                                                                                                                                                                                       771
                                                                                                                                                                                                                                                                                                                                                                                                                              891
                                                                                                                                                                                                                                                                                                                                                                                                                                                         931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                οχ
                                               g
                                                                                                8
                                                                                                                               ò
                                                                                                                                                         원
                                                                                                                                                                                                        8
                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                             ò
                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTT 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCT 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      291 CGCCTTCGCTGGCATGACCAACCACCAGCTGAGCACTGAGTGGAATGACGAGACTCT 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCG 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGCICGCCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCCAGTACCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGAGCTGCATGATGGTGCGGTCTGTGGCCTGGGCCAGGTTTCATGGTCCTGCTGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                        I
                                                                                                                                                                                                                                                                                                                                                                                                is a preferred variant of the chitotriosidase conn sequence given in AAT89180. Also claimed are: (1) a method of diagnosing a tissue remodelling disorder related to expression of a mutated conflictuation; and (2) a method of detecting out nucleic acid amplification; and (2) a method of detecting altered expression of a chitotriosidase protein in a host comprising contacting a bodily sample with an antibody. Chitotriosidase can degrade extracellular matrix substrates with a similar carbohydrate structure to chitin. It can be used to develop products which can be used in the diagnosis and treatment of tissue remodelling disorders such as rheumatoid arthritis or atherosclerosis. Chitotriosidase nucleic acids can be used in the recombinant production of the enzyme, and as probes or primers in diagnostic
                                                                                                                                                                                                                                                                                                      New isolated human chitotriosidase gene - used to develop products for the diagnosis and treatment of tissue remodeling disorders, e.g.
                                                                                                                                                                                                                                                                                                                                                                                      human cDNA sequence encodes chitotriosidase (see AAW31498).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1768;
                                                                                                                                                                                                                                         Ř
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                         Thotakura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; 474 G; 363 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 482; DB 18;
Pred. No. 3.6e-126;
1; Mismatches 541;
                                                                                                                                                                                                                                        Ni J,
                                                                                                                                                                                                                                        Chopra A, Gentz R, Kirkpatrick RB,
                                     Location/Qualifiers
124..1524
                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 21-22; 34pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SMIK ) SMITHKLINE BEECHAM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1768 BP; 401 A; 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29.7%;
                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                              97WO-US05072
                                                                                                                                                                     96US-0014295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                  rheumatoid arthritis
                                                                                                                                                                                                                                                              WPI; 1997-503041/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
Les 866; Conserv
                                                                                                                                                                                                                                                                             P-PSDB; AAW31498
            sapiens
                                                                                                                                           21-MAR-1997;
                                                                                                                                                                     29-MAR-1996;
                                                                                        WO9736917-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                     This
            Homo
                                      Key
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
```

300

391

360 511 420

451

480

631

571

540

691 900 9

751

811 720 871 780 840

931

```
241 TACCAGGAGTTCAATGGCCTGAAGATGAATCCCAAGCTGAAGACCCTGTTAGCCATC
                                                                                                                                                                                                                                                                                                                                                    GGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTAC
                                                                     512 TTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTTCACT
                                                                                                                                                                                                                                                                                               GTGGACAAAAATCGCCCAGAACCTGGATTTGTCAACCTTATGGCCTACGACTTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        812 AGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGCAGCCACCTCAACGTGGATGCTGCTGTGCAACAGGGGCACCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACACATTCATCCTGAGCAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1015 GATGATGTGGAGAGCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGACTGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCT
                           GCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTC
                                                                                                             GGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC
                                                                                                                                                                                                                          CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                      572 GTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCC
                                                                                                                                                                                                                                                                                                                                                                                             AGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                      541 CCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTGGATACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         752 TCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTGACACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCAACACTGGAATTGGTGCCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1052 GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCATGGTCTGGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCCCCCAACTGTCACAGTACCTGGACTACATGCATGTCATGACCTACGACGTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                            632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   872
                                                                                                                                                                   392
                                                                                                                                                                                                                          452
212
                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                        g
                                                                             g
                                                                                                           ά
                                                                                                                                       셤
                                                                                                                                                                 ð
                                                                                                                                                                                             셤
                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                     gg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     q
                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCA 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           рн 3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A cDNA clone (AAT50833), designated chi.50, codes for a 50 kDa human chitinase (AAW08584) that is stable to many proteases, active at pH 3 8 and up to 50 deg, and stable in the circulation. Clones chi.50 and chi.39 (see also AAT50834) were isolated from a human macrophage (SDNA library using as probe a partial clone obtd. using primers (see also AAT50835-36) based on a chitotriosidase purified from a type 1 Gaucher disease pattent. The 2 cDNA clones are the result of alternative splicing of RNA. Chitinase nucleic acid can be used for large-scale produ. of recombinant human chitinases, or can be infection by chitin-contg. pathogens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New human chitinase - used to treat or prevent infection by chitin-contg. pathogens, in diagnosis and as additives to cosmetics, foods, implants etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29.6%; Score 481.4; DB 18; Length 1643; 60.3%; Pred. No. 5.1e-126; ive 0; Mismatches 541; Indels 30;
                                                                                                                                                                gene therapy; vaccine; lysosomal lipidosis; Gaucher's disease; leishmaniasis; sarcoidosis; X-linked adrenoleukodystrophy; multiple sclerosis; drug delivery; cosmetics; food; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1643 BP; 364 A; 490 C; 442 G; 347 T; 0 other;
                                                                                                                                                    Chitinase; chitotriosidașe; chitin; infectious
                                                                                                                                                                                                                                                 Location/Qualifiers
13..1413
7*tag= a
13..75
7*tag= b
7*c.1410
7*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2; Page 39-40; 58pp; English.
                                                                                                                          Human chitinase cDNA clone chi.50.
                                        BP.
                                        AAT50833 standard; cDNA; 1643
                                                                                                                                                                                                                                                                                                                                                                                                                      96WO-NL00225.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  95US-0486839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMSTERDAM
                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1997-118698/11.
P-PSDB; AAW08584.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 866; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UNAM ) UNIV
                                                                                                                                                                                                                                                                                                                                                               WO9640940-A2
                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                     06-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                          19-DEC-1996
                                                                                                                                                                                                                                                                                          sig_peptide
                                                                                                                                                                                                                                                                                                                      mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aerts JMFG;
                                                                 AAT50833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
             RESULT 12
                           AAT50833
```

1111

1051

954

900

991

1171 1074

> g ò g

ω ••

Gaps

30;

Indels

185

245

83

143 305 203 485 383 545 443 605

263 425 323 725

623

563

503

785

683

845

905 803 965

```
1026 CCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGTCCTGCTGGCCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCA 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAATAAGAACA 365
            the extracellular matrix. Chitinase also improves the activity of other antifungal agents and may allow a reduction in the dose of such agents, and thus of their side effects.
                                                                                                                                                                                                                                                                                                                                                     GACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACATCGACC
                                                                                                                                                                                                     CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCA
                                                                                                                                                                                                                                                                                                                                         GCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126 CAGGICTIGICCITATACIGAATITGCAGCICGGCICIGCCIACCAGCIGACAIGCIACI
                                                                                                                                                                                                                                                                                                                                                                                         CCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTCAGGACAAGCATCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC
 rheumatoid arthritis, where overexpression of the protein can damage
                                                                                    Length 1636;
                                                             Sequence 1636 BP; 361 A; 491 C; 440 G; 344 T; 0 other;
                                                                                    , Match 29.6%; Score 481; DB 19; Local Similarity 60.8%; Pred. No. 6.6e-126; Loss 853; Conservative 0; Mismatches 520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     744
                                                                                                                                                               24
                                                                                                                                                                                       186
                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                               144
                                                                                                                                                                                                                                                                                        306
                                                                                                                                                                                                                                                                                                                 204
                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     864
                                                                                      Query Match
                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oy
ag
 8888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                        å
                                                                                                                                                              g
                                                                                                                                                                                        à
                                                                                                                                                                                                               g
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                         1241
                                                 1411
                                                              CTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTAC 1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence encodes a novel human chitinase isolated from clone MO-218. Chitinases are useful for treating or preventing fungal infection and as immunogens for generating antibodies which are used to purify, detect and quantify chitinases, e.g. for diagnosis of Gaucher's disease. The nucletc acid sequence of the chitinase is also useful as a probe to identify and isolate genomic DNA encoding chitinases or similar proteins, or cells expressing them or to generate transgenic ('knockout') rodents. It can also be used in hybridisation assays and to detect genetic alterations in the chitinase gene related to disease. Agents that inhibit this protein may be useful in treatment of Gaucher's disease and
CCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGG
                                                                                                                                                  CAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                1352 AGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGC
                                                                                                                                                                                                                                                                                                                                     Chitinase; human; fungal infection; immunogen; diagnosis; treatment; Gaucher's disease; transgenic; detection; hybridisation; antifungal; rheumatoid arthritis; overexpression; extracellular matrix; ss.
                       CCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acids encoding human chitinase - useful as antifungal especially in combination with other antifungals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= c
/product= chitinase
/note= "from clone MO-218"
                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 3; Page 38-40; 63pp; English.
                                                                                                                                                                                                                                                                                                                 Human chitinase clone MO-218 cDNA
                                                                                                                                                                                                                                       AAV10435 standard; cDNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US10460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-0663618
                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                    2..64
/*tag= b
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-052316/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAW40259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ICOS-) ICOS
                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W09747752-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-JUN-1996;
                                                                                                                                                                                                                                                                                        15-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-DEC-1997
1292
                                                                       1242
                                                                                                1412
                                                                                                                                                 1472
                                                                                                                                                                          1351
                                                                                                                                                                                                                                                               AAV10435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gray PW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agents,
                                                                                                                                                                                                                                                                                                                                                                                         Ношо
                                                                                                                                                                                                              RESULT 13
AAV10435
ID AAV1
                                                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                    a
                                                                                                                                                                    8
                      g
                                                                    셤
                                                                                              ò
                                                                                                                                                 ò
ð
                                                ò
```

fragments of human chitinase used to treat fungal

```
This is the nucleotide sequence of an allelic form of the human chitnase enzyme, which is capable of degrading Chitin (a linear homo polymer of beta-1,4-linked N-acetylglucosamine residues).

Chitinase or beta-1,4-linked N-acetylglucosamine residues).

Chitinase fragments can be used to screen for proteins or other molecules that specifically bind to the chitin-binding domain of human continuation, as well as for purifying chitinase, as well as for purifying chitinase, as well as for the invention and quantification of chitinase. Polynucleotide fragments of the invention are useful as a source of probes and primers, and to express the proteins recombinantly. The chitinase fragments, when conjugated to antifungal compounds, are used to treat animals, especially humans, infected with chitin-containing parasites such as coccidiolomycosis, blastomycosis, paracoccidiolomycosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mucormycosis, histoplasmosis, cryptococcosis, chromoblastomycosis, sporotrichosis, and dermatophytoses. Chitin can be degraded by the enzyme chitinase. Use of whole chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                       protein for treating infections, especially fungal infections, is problematic. In view of the increasing incidents of life-threatening fungal infection in e.g. immunocompromised individuals, there exists a need for identifying new compounds for treating fungal infection. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATCGAATGGAACGATGTGACTCTACCAAGCTTTCAATGGCCTGAAAAATAAGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  204 CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGATGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126 CAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24 CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186 TCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGGCGCTTCATGCCTGACAACATCGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACCAACTGGGCCCAGTACAGACAGGGGGGGGCTCGCTTCCTGCCCAAGGACTTGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAGTATGAGGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CICCICAGGACAAGCAICICITCACIGICCIGGIGCAGGAAAIGCGIGAAGCIITIGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCCGTAGACAAGGAGGGCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chitin-binding fragments of the present invention provide this need.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1636 BP; 361 A; 491 C; 440 G; 344 T; 0 other;
                                                                                                                  Example 1; Page 55-57; 83pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 60.8 les 853; Conservative
                                                                                      infections in animals
                                                                  Novel chitin-binding
                   WPI; 1999-551417/46.
                                 P-PSDB; AAY42425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                        1445
                                                                                                  GGCTTAAGCACAAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTCA 1205
                                                                                                                     GCCTGCAGAGTGCAAGTTGCACGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTC 1325
                                                                                                                                                                                                                                                                                                     1326 CCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTG 1385
                                                                                                                                                                                                                                                                                                                            1215 CCTCTGAACCTGAGCA-------TGGCCCCAGCCCTGGACAAGACA 1253
                                                                                                                                                                                                                                                                                                                                                                                                                                       1446 GCCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA 1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCT-----GGAAGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT 977
                                 1086 ATCAGGGCAATGTGTGGGTTGGCTATGACATCAAGAGCTTCGATATTAAGGCTCAAT
                                                                 978 TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAAACCAAGGTCAGCT
                                                                                                                                                                     CTGGCACTTTCTGCAACCAGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCG
                                                                                                                                                                                                                                                       1386 GATTCTGTGTGTGAGCCAACGGCCTCTACCCCGTGGCAATAACAGAAATGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                        1254 CGTTCTGCCAGGCAAAGCTGATGGGCTCTATCCCAATCCTCGGGAACGGTCCAGCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chemotherapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                noncoding 5'/3' regions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chitin; fungal infection; immunocompromised; AIDS; chemothe organ transplant; parasite; chitin-binding; allele; vector; truncated protein; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human_Chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product- Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MO-218 clone of human Chitinase, with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1506 CCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
2..1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US05343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0039198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product=
66..1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product=
2..65
/*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA221847 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gray PW, Tjoelker LW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    409946390-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L2-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .2-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-SEP-1999
                                                                                                                                                                                                                                  1266
                                                                                                                                                                                                                                                                    1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ21847;
924
                                                                                                                                                                   1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ21847
                                 ö
                                                                  윱
                                                                                                  ò
                                                                                                                                  a
                                                                                                                                                                   à
                                                                                                                                                                                                 a
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                 윱
                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
```

ë,

Gaps

30;

Length 1636; Indels

Score 481; DB 20; Pred. No. 6.6e-126;); Mismatches 520;

; 0

29.6%; 60.8%;

245

83

143 305 203 365 443

605

545

485

383

263 425 323 665

```
The present invention relates to a chitinase immunoglobulin (Ig) fusion product, comprising a human chitinase fused to at least a portion of an immunoglobulin chain. The fusion product is useful for treating fungal infections (mycoses) such as candidiaals, aspergillosis, blastomycosis, coccidioidomycosis, paracoccidioidomycosis, histoplasmosis, mucormycosis, cryptococcosis, chromoblastomycosis, sporotrichosis and dermatophytoses. The fusion protein is useful for reducing the amount of non-chitinase antifungal agent needed to exert an antifungal activity. The fusion protein is also useful for preparing a medicament for the prophylactic or therapeutic treatment of fungal infections. Chitinase immunoglobulin fusion product has unexpectedly improved serum half-life and formulation properties. The present sequence is human chitinase cDNA from clone pMO-218. Chitinase enzyme degrades chitin which is a homopolymer of beta-(1,4)-linked N-acetyJglucosamine residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAATAAGAACA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel chitinase immunoglobulin fusion product, useful for treating fungal infections and reducing the amount of a non-chitinase antifungal agent needed for the treatment
fungal infection; candidiasis; aspergillosis; coccidioidomycosis; blastcomycosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis; chromoblastcomycosis; sporotrichosis; mucormycosis; dermatophytoses; clone pMO-218; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGGCGCTTCATGCCTGACAACATCGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGITICAIGGICCIGCIGAIGAICCCAIGGGGCICIGCIACAAACIGGICIGCIACI
                                                                                                                                                                                                                                                                                                          pMO-218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30;
                                                                                                                                                                                     /*tag= a
/product= "Human chitinase from clone pMO-218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1636;
                                                                                                                                                                                                                                                                                       /*tag= c
/product= "Human mature chitinase from clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1636 BP; 361 A; 491 C; 440 G; 344 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Steiner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 29.6%; Score 481; DB 22; Local Similarity 60.8%; Pred. No. 6.6e-126; les 853; Conservative 0; Mismatches 520;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shaw KD,
                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Page 29-31; 39pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                 18-SEP-2000; 2000WO-US26960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0409918
                                                                                                                                                                                                                                              /*tag= b
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Allison DS, Dietsch GN,
                                                                                                                                                             ..1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-266141/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; AAE00432
                                                                                                                                                                                                                                                                                                                                                  40200123430-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-SEP-1999;
                                                                                                      Homo sapiens
                                                                                                                                                                                                                           sig_peptide
                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                         05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                            Key
    NAME OF THE PROPERTY OF THE PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1325
                                                                                                                                                                                                                                                                                                                                                                                                                           CIGGTCCTGCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1086 ATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAAT 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGGGCCCATTGATCTGGATGACTTCA 1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTG 1385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCTGAACCTGAGCA------1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .446 GGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA 1505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           803
                                                                                                                                                                                                                                                                                                                                                                                                                                                       977
                                        785
                                                                                                                                          683
                                                                                                                                                                              TCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGA 845
                                                                                                                                                                                                                         743
                                                                                                                                                                                                                                                                 905
                                                                                                                                                                                                                                                                                                                                              GACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGTG 965
                                                                                                                                                                                                                                                                                                                                                                   TCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC
                                                                                                                     GCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCTTCCATACTTGCCTTCAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1386 GATTCTGTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCT
                                                                                                                                                                                                                                                               CCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCT
                                                                                               ATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAGAACAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; antifungal; chitinase; immunoglobulin; Ig; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human chitinase cDNA from clone pMO-218.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTCCTGCAAATGCTGCACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAD03759 standard; cDNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1026
                                                                                                                                                                                                                                                                                                                                                                                                                             996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1374
                                                                                                                                    624
                                                                                                                                                                              786
                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                              906
                                                                                                                                                                                                                                                                                                                                                                                     804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAD03759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                             a
                                                                                                                                                                          ò
                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                 à
                                                                                             ò
                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
```

Gaps

83

	λο .	à	G do	Sea1 Job											•							
																*						
204 CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATC 263	366 GCCAGCTGAAAACTCTCGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTG 425	264 ccaagctgaagaccctgttagccatcgaaggctggaattrcggaactcagaagttcacag 323	426 CCATGGTTCTACTCCTGAGAACCGCAGACTTTCATCACCACCATCATCAATTCCTGC 485	54	60	AGGAGGCCAAGCAGATCAACAGCCCAGGTGATGGTCACTGCTGCAGTGCTGCTGCAGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGC	504 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTTTTGAGTGCAGCGGTTCCAGCTGGGC 563	666 TCTCCAATATCCAGTÚTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATC 725	726 AIGTCAIGACTACCACCTCCAIGGAGGGCTACACTGGAGAGAACAGCCCCC 785			AACAGTGGCTGCAAAAGGGGACCCTGCCAGCAAGCTGATCCTTGGCATGCCTACGCAGCTGCTGCTACGCAACAGCTGATCCTTGGCATGCCTACCTA	906 GACACAACTTCATCCTGAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTG 965 	966 CTGGTCCTGCTGGGCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACTACGAGATCTGTA 1025	1026 CCTTCCTGAAAAATGAGCCACTCAGGGATGCGCTCAGGAAGTGCCTTATGCCT 1085	1086 ATCAGGGCAATGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAAT 1145	1146 GGCTTAAGCACAACTTTGGAGGCGCCATGGTCTGGGCCATTGATGGTGAGTGA	12			1326 CCAGTGGCAGCGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGAGGCAGTG 1385	144
ΩD	Οy	Q	y da	o o	Qy Dp	δλ	q	oy op	Qy Db	ον έ	3 8	; 음	Oy Dp	Qy Dp	Oy Dp	oy O	25 26	y g	ì ở	qq	상 임	Oy Dp

```
OY 1446 GGCACTGCGTGAATGGAGTCACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA 1505

1314 ACAGCTGTGCAGCGGGCGCTGTTCCAGCAAAGCTGCCCGACAGGCCTGGTGTTCAGCA 1373

OY 1506 CCAGCTGTGCTGCAACTGG 1528

1374 ACTCCTGCAAATGCTGCACCTGG 1396
```

Search completed: July 3, 2003, 05:03:18 Job time : 377.46 secs Sequence

36,

Sed neuce sed ne

Scoring table:

Searched:

Database

Perfect score:

Sequence:

OM nucleic

ü

```
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 233 South Wacker Drive/6300 Sears Tower
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Gray, Patrick W.
APPLICANT: Tjoelker, Larry W.
TILLE OF INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/039,198A
FILING DATE:
                                                                               US-09-292-225-16
US-09-292-225-16
US-09-292-225-40
US-09-292-225-42
US-09-292-225-34
US-09-292-225-34
US-09-292-225-34
                                                                                                                                                                                                                                                                                                      US-07-939-501A-14
US-07-939-501A-13
                                                                                                                                                                                                                                                                                                                                                  US-07-939-501A-9
US-07-939-501A-11
                                                                                                                                                                                                                                                                  US-07-939-501A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
REFERENCE/DOCKET NUMBER: 27866/34391
TELEPHONE: (312) 474-6300
TELEPHONE: (312) 474-630
TELEPHONE: (312) 474-630
TELEPHONE: (312) 474-6310
TELENGTH: 1656 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTER Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/09039198A Patent No. 6200951
1608
1665
11665
11752
11752
11752
11752
11621
11621
1167
11167
11167
11167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27..1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
  STRANDEDNESS:
                                               NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
111.8
111.8
111.8
111.8
111.8
111.8
111.8
111.8
110.3
10.3
10.3
                                                                                                                                                                                                                                                               APPII
                                                                                                                                                  3, 2003, 04:38:16 ; Search time 78.4127 Seconds (without alignments) 6355.472 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Al
Sequence 13, 2
Sequence 15, 2
                                                                                                                                                                                                                                                                                    1 gctttccagtctggtggtga.........tgcaataaaatcagcagtc 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, 8 Sequence 1, 8 Se
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3
Sequence 3
Sequence 4
Sequence 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 6
Sequence 6
Sequence 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/PcTUS_COMB.seq:*
                      GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-151-011-3
US-09-343-623-3
US-09-039-198A-1
US-08-877-599-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-343-623-5
US-08-694-915-1
US-08-694-915-3
PCT-US94-07754-4
                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-267-574-1
US-08-486-839-5
US-09-151-011-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-545-814-13
US-09-545-814-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-486-839-3
                                                                                                                                                                                                                                                                                                                                                                                               441362 segs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                           nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC Gapoxt 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                  US-10-004-219B-2
1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length
                                                                                                                                                         July
```

ë

Gaps

30;

Length 1656;

Score 483; DB 4; Length 16 Pred. No. 4.6e-132; 0; Mismatches 545; Indels

Query Match 29.7%; Best Local Similarity 60.2%; Matches 870; Conservative

Sequence

US-09-545-814-30

127.2 120.6 120.6

Sequence Sequence Sequence

477.2 477.2 477.2 369 354.8 339.8

Score

Result No.

481.4 481.4 481.4 481.4

NAME/KEY:

US-09-039-198A-3 LOCATION:

QY 1164 TTGGAGGGG Db 1081 TGGGCGGGG QY 1224 AGGCCAGT QY 1224 AGGCCAGT QY 1284 GCACGCTC QY 1284 GCACGGCTC QY 1201 CAGCACCC QY 1344 GCACGCGCA QY 1346 GCACGCGCACCC QY 1346 GCACGCGCACCC QY 1346 GCACGCGCACCCC QY 1346 GCACGCGCACCCC QY 1404 CCAACGGCCCCC QY 1404 CCAACGGCCCC	1297 1464 1357 1524 1617	RESULT 2 US-08-877-599-3 US-08-877-599-3 Sequence 3, Applicati Patent: No. 637212 SENERAL INFORMATION: TITLE OF INVENTION MUMBER OF SEQUENCE NUMBER OF SEQUENCE NUMBER OF SEQUENCE NUMBER OF SEQUENCE STREET: 630 Se STREET: 6100 Se CITY: Chicago	Окредиционини	TITORICAL TARK REGISTRATION NUM REGISTRATION NUM REFERENCE/COCKET TELECOMMUNICATION TELERAX: 312/47. TELERAX: 312/47. TELERAX: 312/47. TELERAX: 25-3856 INFORMATION FOR SEG SEQUENCE CHARACTER LENGTH: 1656 ban TYPE: nucleic as TYPE: NAME/KEY: CDS
GACTGGTGCTGACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC	TGACTCTCTACCAAGCTTCAATGGCCTGAAAATAAGAACAGCCAGC	1		924 GCAACCCTCCAACAGTGGAATTGGTGCCCCCACCTCGGTGCTGCTGGGCCCT 983
\(\frac{1}{2} \)	8 8 8 8 8 8	8 8 8 8 8 8	4 4 4 6 6	6 6 6 6 6 6 6

```
CAGCAGAACTGCCAGGCCGGGCTTGTCGACACCAGCTGTGATTGCTGCA 1523
GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC 1223
                                             TTTCCCCTAATCTCCACCCTGAAGAGGCCCTCGGCCTGCAGGTGCCAAGTT 1283
                                                                                                                                       CTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                        DRESS:
shall, O'Toole, Gerstein, Murray & Borun
ears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                     Patrick W.
N: Chitinase Materials and Methods
ES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LE FORM:
Floppy disk
M PC compatible
TEM: PC-DOS/MS-DOS
TEM: PC-BOS/MS-DOS
TIEN: US/08/877,599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ON DATA:
UNDER: US 08/663,618
144-JUN-1996
INFORMATION:
URCS, Li Hsien
NUMBER: 33,547
NUMBER: 27866/33994
ON INFORMATION:
12/474-6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sd States of America
                                                                                                                                                                                                                                                                                                                                                                   ion US/08877599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D ID NO: 3:
ERISTICS:
base pairs
acid
single
ear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     514
                                                                                                                                                                                                                                                                                                          21
```

1283

1223

1103

```
TGGGCGGGGCCATGGTCTGGGCACTGGACTTAGATGACTTTGCCGGCTTCTCCTGCAACC 1140
                                                                                                                                                                                                                                                              GCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG 1343
                                                                                                                                                                                                                                                                                             1201 CAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAAACCTGAGCA-- 1255
                                                                                                                                                                                                                                                                                                                           GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG 1403
                                                                                                                                                                                                                                                                                                                                                          1464 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA 1523
                                                                                                                                                                                                                                                                                                                                                                                       1404 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG 1463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTGCCGCTGAGCTGCATCATGGTGCGGTCTGTGGCCTGGGCAGGTTTCATGGTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84 GACTGGTGCTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC
                CCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG
                                             961 CCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCTTCCGGGACAACCAGTGGG
                                                                           TTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAAT
                                                                                                       TGGCCTTTGATGATGTGGAGGCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGAC
                                                                                                                                       AGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                545;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 483; DB 4;
Pred. No. 4.6e-132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Gray, Patrick W.
APPLICANT: Tjoelker, Larry W.
TITLE OF INVENTION: CHITINASE CHITIN-BINDING FRU.
FILE BEFERENCE: 27866/35407
CURRENT APPLICATION NUMBER: US/09/267,574
CURRENT FILING DATE: 1999-03-12
EARLIER PELLING DATE: 1998-03-12
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 3, Application US/09267574; Patent No. 6399571; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29.7%;
larity 60.2%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) NAME/KEY: mat_peptide
; LOCATION: (90)..(1424)
US-09-267-574-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: (27)..(1424)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1524 ACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1417 CCTGG 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al Similarity
870; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-267-574-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Si
Matches 870;
                 1044
                                                                                                        1021
                                                                                                                                        1164
                                                                                                                                                                     1081
                                                                                                                                                                                                                                                                1284
                                                                                                                                                                                                                                                                                                                             1344
                                                                                                                                                                                                                                                                                                                                                           1256
                                                                                                                                                                                                                                                                                                                                                                                                                     1297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                           1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                           g
                                                                           ò
                                                                                                     g
                                                                                                                                        à
                                                                                                                                                                     윱
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                             음
                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                     QQ
                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAG 1043
                                                                                                                          ë
                                                                                                                                                                                                               203
                                                                                                                                                                                                                                              126
                                                                                                                                                                                                                                                                              263
                                                                                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                                                           323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            960
                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTTGACCTTGACTGGGGGTACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAGCCATCGGAGGCTGGAATTTCAGCACTCAGAAGTTCACAGATATGGTAGCCACGGCCA 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGGCTCCTGGGAGGCTACACTGGAGAACACCCCCCTCTACAATACCCGACTG 803
                                                                                                                                                                                    99
                                                                                                                                                                                                                                                                                             TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCCATTGGAGGTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 GACTGGTGCTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATAC
                                                                                                                                                                         144 TGAATTIGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                              TGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACTTCACCAACTGGGCCCAGT
                                                                                                                                                                                                                                                                              ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACC
                                                                                                                                                                                                                                                                                                                                                             AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGCAGGAAGCCCAGACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624 ACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACACCGGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           847 CCTCCTCATCAGACACCAGAGTGGGGGCCCCAGCCACAGGGTCTGGCACTCCAGGCCCCT
                                                                                                                        Gaps
                                                                                                                        30;
                                                                                        Length 1656;
                                                                                        Score 483; DB 4; Length 16
Pred. No. 4.6e-132;
0; Mismatches 545; Indels
                                                                                      Ouery Match 29.7%;
Best Local Similarity 60.2%;
Matches 870; Conservative
                              mat_peptide
90..1424
27..1424
 ; LOCATION:
; FEATURE:
; NAME/KEY:
; LOCATION:
US-08-877-599-3
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                             204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 787
                                                                                                                                                                                                                                                                                                                                                                        187
                                                                                                                                                                                                                                                                                                                                                                                                     324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                          264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   864
```

g

g ò

ö

음 ò g

ò

g

ò

g

à

g

ò

a

ò

à

a

à 셤 ò g ò g 8

ò

g

õ

g

ò g

ò

1416

ä; 143 99

Sun

```
1297 CTGATGGGCTCTATCCTCGGGAACGGTCCAGCTTCTACAGCTGTGCAGCGGGC
                                                                1201 CAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA--
                                                                                                                     1404 CCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92 CTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG
                                        GCACGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACG
                                                                                             GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG
                                                                                                                                                                                                   1464 TCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                       A human chitinase, its recombinant
production, its use for decomposing chitin,
in therapy or prophylaxis against infection
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATER: PSYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 481.4; DB 2;
Pred. No. 1.3e-131;
); Mismatches 541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APALCATION DATA:
APPLICATION NUMBER: US/08/486,839
FILING DATE: 07 - June - 1995
ATTORNEY/AGENT INFORMATION:
NAME: BARON, RORALD J.
REGISTRATION NUMBER: 29,281
REFERENCE/DOCKET NUMBER: 294-26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 822-3550
TELEFAX: (516) 822-3550
TELEFAX: (516) 822-3550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              America
                                                                                                                                                                                                                                                                                                                                                     US/08486839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Hoffmann & Baron STREET: 350 Jericho Turnpike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 29.6%;
Best Local Similarity 60.3%;
Matches 866; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: A hu
TITLE OF INVENTION: proof
TITLE OF INVENTION: in
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             =
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                     Sequence 3, Application
Patent No. 5928928
GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                   1417 CCTGG 1421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jericho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                          RESULT 4
US-08-486-839-3
                                        1284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                      1256
                                                                g
                                                                                                                     ద
                                                                                                                                                                          a
                                                                                                                                                                                                                              g
                                        ò
                                                                                            ò
                                                                                                                                                 ò
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       984 ATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAG 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021 TGGGCTTTGATGATGATGAGGCCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGAC 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCACTCAGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGG 1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TIGGCTATGACAACATCAAGAGCTICGATATTAAGGCTCAATGGCTTAAGCACAACAAAT 1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1224 AGGGCAAGTTTCCCCTAATCTCCACCTGAAGAAGGCCCTCGGCCTGCAAGTGCAAGTT 1283
                                                                               186
                                                                                                                                                              383
                                                                                                                                                                                                                 443
                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                   486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         803
                                                     263
                                                                                                                                                                                                                                                                                                                                                                                                        546
                                                                                                                                                                                                                                                                                                                          563
                                                                                                                                                                                                                                                                                                                                                                              623
                                                                                                                                                                                                                                                                                                                                                                                                                                  683
                                                                                                                                                                                                                                                                                                                                                                                                                                                         909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         923
                                                                                                                                                                                                              TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                      247 AGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATCCCAAGCTGAAGACCCTGT
                                                                                                                                                                                                                                                                     AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                   GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATC
                                                                                                                                                                                                                                                                                                                                       TCTTCACTGTCCTGGTGCAGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCA
                                                                                                                                                                                                                                                                                                                                                                                            624 ACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGGCATCTCCAATATCCAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCATGGCTCCTGGGAGGGCTACACTGGAGAACAGCCCCCCTCTACAAATACCCGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCCTCATCAGACACCAGAGTGGGGGCCCCACAGGGTCTGGCACTCCAGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGGAGGCGCCATGGGCCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCCGGGCCATGGTCTGGCCACTGGACTTAGATGACTTTGCCGGCTTCTCCTGCAACC
 TGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGT
                                                     307
                                                                                                                                                                                                                                                                                                                                                  427
                                                                                                                                                                                                                                                                                                                                                                            564
                                                     204
                                                                            127
                                                                                                                                  187
                                                                                                                                                                                                                                                                                              367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                       264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           804
                                                                                                                                                            324
                                                                                                                                                                                                                 384
                                                                                                                                                                                                                                                                                                                                                                                                      487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1081
                          67
                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
 à
                         g
                                                   ò
                                                                           g
                                                                                                       à
                                                                                                                               g
                                                                                                                                                           à
                                                                                                                                                                                 g
                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                        윱
                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                               å
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρĢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

its use diseases.

ä,

S

```
TTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCT 1291
                            CCAG---AGCTTGAAGTTCCAAAACCAGGTCAGCCCTCTGAACCTGAGCA------ 1241
                                                                                                                 ------TGGCCCCAGCCCTGGACAGACACGTTCTGCCAGGGCAAAGCTGATGGG 1290
                                                                                                                                                                     CTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTAC 1471
                                                               CCAGCICAGCCCAITGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGG 1351
                                                                                                                                                                                                                          CAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                       $5/09151011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: RIOPPY disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (516) 822-3550
TELEFAX: (516) 822-3582
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.6%;
larity 60.3%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 1643 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                 Sequence 3, Application Patent No. 6057142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ll Similarity
866; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                               Patent No. 6057142
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Syosset
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
CITY: Sy
STATE: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                      -09-151-011-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-151-011-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 866
                                                                                                                    1352
             1232
                                                                                         1195
                                                                                                                                              1242
                                                                                                                                                                                                                          1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
            QY
Db
                                                                                                                                                            ð, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                               Q 9
                                                                                                         P Q
                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1052 GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTAT 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAATTTGGAGGC 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1015 GATGATGTGGAGAGCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGACTGGGCGGG 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             900
                                                                                         511
                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                               GCCTTTGCTGGGAGGCAGAACAACGAGATCACCATCGAATGGAACGATGTGACTCTC 331
                                                                                                                                                                                332 TACCAAGCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATT 391
                                                                                                                                                                                                            TACCAGGAGTTCAATGGCCTGAAGAAGATGAATCCCAAGCTGAAGACCCTGTTAGCCATC 300
                                                                                                                                                                                                                                      GGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC 451
                                                                                                                                                                                                                                                                                                                                             512 TTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACT 571
                                                                                                                                                                                                                                                                                                                                                                    421 CTTGACTGGGAGTACCCAGGAAGCCAGGGAGCCTGCCGTAGACAAGGAGCGCTTCACA 480
                                                                                                                                                                                                                                                                                                                                                                                                GICCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCC 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                  691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACACTTCATCTGAGCAACCCC 931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   932 TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGGGCCCTATGCCAAG 991
 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGGACAAAATCGCCCAGAACCTGGATTTGTCAACCTTATGGCCTACGACTTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                        692 ATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        752 TCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTTGGGAGAAGGTCACGGGACATAACAGCCCCCTCTACAAGAGGCAAGAAGAGAGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           812 AGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCA
                          CAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCCAATATCCAGTCTGGCTATGAG
CTGAGCTGCATCATGGTGCGGTCTGTGCCCTGGGCAGGTTTCATGGTCCTGCTGATGATC
                                                                            GGCCTGGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTAC
                                                                                                                                                         181
                                                                                                                                                                                                            241
                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                572
                                                                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      992
                                                                           212
                                                                                                                               272
                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                       ò
                                                유
                                                                          ŏ
                                                                                                g
                                                                                                                              ò
                                                                                                                                                    g
                                                                                                                                                                        õ
                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
```

TITLE OF INVENTION: A Human Chitinase, Its Recombinant
TITLE OF INVENTION: Production, Its Use For Decomposing Chitin, Its Use in
TITLE OF INVENTION: Therapy or Prophylaxis Against Infection Diseases.
CORRESPONDENCE ADDRESS: ä 151 9 92 CTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG CIGAGCTGCATCATGGTGCGGTCTGTGGCCTGGGCAGGTTCATGGTCCTGATGATC Gaps 30; Length 1643; Indels SYSTEM: PC-DOS/MS-DOS PatentIn Release #1.0, Version #1.30 Score 481.4; DB 3; Pred. No. 1.3e-131;); Mismatches 541; DIV CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/151,011
FILING DATE: 10 - September - 1991
ATTORNEY/AGENT INFORMATION: United States of America ADDRESSEE: Hoffmann & Baron, LLP STREET: 6900 Jericho Turnpike NAME: MOITISS, ROBER C, REGIGERATION NUMBER: 42,910 REFERENCE/DOCKET NUMBER: 294-32 TELECOMMUNICATION INFORMATION:

1111	RESULT 6 US-09-343-623-3 Sequence 3, Application US/09343623 Sequence 3, Application US/09343623 Sequence 3, Application US/09343623 Sequence 1	## PRPLICATION NUMBER: US/09/343,623 # FILING DATE: PRIOR APPLICATION DATA:
152 CAGCTCGGCTCTGCCTGCCTGACAGCTGCTACCTGCCAACTGGGCCCAGTACCGGCCA	GGAC CACA CACA CACA CACA CACA CACA CACA	### ### ##############################

1351

```
CTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTAC 1471
                                                                                                                                                                                          1291 CTCTATCCCAATCCTCGGGAACGGTCCAGCTTCTACAGCTGTGCAGCGGGGGGGCGGTGTTC 1350
                        TACCCCCTCATCCAGACGCTACGCCAGGAACTGAGTCTTCCATACTTGCCTTCAGGCACC 1194
TITCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCT 1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126 CAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACT 185
                                                                                                                                                                                                                    1472 CAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                  CCAGCTCAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGG
                                                                                                          1352 AGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1636;
                                                                                                                                                                                                                                                                                                                                                                                                                                & Borun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches 520; Indels
                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Gray, Patrick W.
APPLICANT: Tjoelker, Larry W.
TITLE OF INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                       E: Marshall, O'Toole, Gerstein, Murray
233 South Wacker Drive/6300 Sears Tower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 481; DB 4; I Pred. No. 1.8e-131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/039,1982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: United States of America ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09039198A Patent No. 6200951
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
REFERENCE/DOCKET NUMBER: 2786
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: (312) 474-6300
TELEFAX: (312) 474-048
INFORMATION FOR SEO ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.6%;
60.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1636 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            853; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mat_peptide
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Illinois
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Chicago
STATE: Illinoi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ropology:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
US-09-039-198A-1
                                                                                                                                                                                                                                                                                         RESULT 7
US-09-039-198A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
 1232
                           1135
                                                     1292
                                                                                                                                     1242
                                                                                                                                                               1412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                     g
                                                  ò
                                                                             g
                                                                                                        ò
                                                                                                                                    g
                                                                                                                                                               ò
                                                                                                                                                                                          g
                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1052 GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTAT 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAAATTTGGAGGC 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                         CTTGACTGGGAGTACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGCGCTTCACA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        271
                                                                                                                                                                            391
                                                                                                                                                                                                                                  451
                                                                                                                                                                                                                                                           301 GGAGGCTGGAATTTCGGCACTCAGAAGTTCACAGATATGGTAGCCACGGCCAACAACAACGT 360
                                                                                                                                                                                                                                                                                       511
                                                                                                                                                                                                                                                                                                                                            571
                                                                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCCCCCAACTGTCACAGTACCTGGACTACATGTCATGACCTAGGACCTCCATGGC 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGC 811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721 GCAGCAGCCAGCCTCAACGTGGATGCTGTGCAACAGTGGCTGCAGAAGGGGACCCCT 780
                                                                                                                       GCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTC 331
                                                                                                                                                                                                                                                                                                                                                                                                  GTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCC 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCA
                                                                  GCCTGGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTAC
                                                                                                                                                                          GGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC
                                                                                                                                                                                                                                                                                      CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                            TITGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCTGATGGTCACTGCTGCTGCTGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              872 GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGCTGGGCCCTATGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATGATGTGGAGAGCTTCAAAACCAAGGTCAGCTATCTGAAGCAAAGGGACTGGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1075
                                                                                                                     272
                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                572
                                                                                                                                                                                                                                                                                                                                                                                                                                                       632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                212
                                                                                                                                                                            332
                                                                                                                                                                                                                                 392
                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                                           512
                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       812
                                     19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                            g
                                                                                                                                                                                                g
                                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                  g
                                                                                      Q
                                                                                                              ŏ
                                                                                                                                                                          ö
                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                          ò
            ð
                                                               ò
```

ä

```
CCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTG 1385
 1098 CCGGCTTCTCCTGCAACCAGGGCCGATACCCCCTCATCCAGACGCTACGGCAGGAACTGA 1157
                                                       1158 GTCTTCCATACTTGCCTTCAGGCACCCCAG---AGCTTGAAGTTCCAAAACCAGGTCAGC 1214
                                                                                                                                                       ACAGCTGTGCAGCGGGGGGGCTGTTCCAGCAAAGCTGCCCGACAGCCTGGTGTTCAGCA
                             GCCTGCAGAGTGCCACGCCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTC
                                                                                                              ------TGGCCCCAGCCCTGGACAGACA
                                                                                                                                                                                                1446 GGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA
                                                                                                                                          1386 GATTCTGTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3: Marshall, O'Toole, Gerstein, Murray & Borun
6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Gray, Patrick W.
TITLE OF INVENTION: Chitinase Materials and Methods
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRINT APPLICATION NATA:
APPLICATION NUMBER: US/08/877,599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27866/33994
                                                                                                                                                                                                                                                        CCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
PRIOR'APPLICATION DATA:
APPLICATION NUMBER: US 08/663,618
FILING:DATE: 14-UN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08877599
Patent No. 6372212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FELECOMMUNICATION INFORMATION
                                                                                                              1215 CCTCTGAACCTGAGCA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 312/474-6300
TELEFAX: 312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1636 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mat_peptide
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 6300
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION:
US-08-877-599-1
                                                                                                                                                                                                                                                                                                                            RESULT 8
US-08-877-599-1
                                                                                   1326
                                                                                                                                                                                                                          1314
                                                                                                                                                                                                                                                        1506
                              1266
  a
                                                       g
                                                                                                             g
                              ð
                                                                                   ò
                                                                                                                                          à
                                                                                                                                                                    요
                                                                                                                                                                                                à
                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1086 ATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAAT 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGTCCTGCTGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTCA 1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1038 ATCTGAAGCAGAAGGGACTGGCCGGGCCATGGTCTGGGCACTGGACTTAGATGACTTTG 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGCACTITCTGCAACCAGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCG 1265
                                                                                                                                                                                                               425
                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                      485
                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                        665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           803
                                          245
                                                                                                                            203
                                                                                                                                                                                   263
                                                                                                                                                                                                                                                                                                                            545
                                                                                                                                                                                                                                                                                                                                                                                  605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                                                                                                CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCA 305
                                                                                                                                                       CCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAATAAGAACA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTCCAATATCCAGTCTGGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC 725
              83
TCACCAACTGGGCCCAGGCCAGGCCTGGGGGCGCTTCATGCCTGACAACATCGACC
                                                          GCCAGCTGAAAACT¢TCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTG
                                                                                                                                                                                                                                        264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG
                                                                                                                                                                                                                                                                   CCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC
                                                                                                                                                                                                                                                                                              324 ATAIGGIAGCCACGCCAACAACACCTCAGACCITIGICAACTCGGCCATCAGGTITCTGC
                                                                                                                                                                                                                                                                                                                           GCCAGTATGAGGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                        CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                 TCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAGAACAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 978 rcccccacaccacrcccrccccrrccarcarcarccaccrrcaaaccaaccr
                                        186
                                                                   84
                                                                                                246
                                                                                                                          144
                                                                                                                                                       306
                                                                                                                                                                                  204
                                                                                                                                                                                                             366
                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                                                                                                                                                                 546
                                                                                                                                                                                                                                                                                                                                                                                                                                       909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1206
                                                                                                                                                                                                                                                                   126
                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           996
             셤
                                       ö
                                                                   음
                                                                                             ò
                                                                                                                       qq
                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                      ò
                                                                                                                                                                       . Q
                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

σ

1157

1214

1505

```
GCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTC 1325
                                                                                                                                                                                                                                          1314 ACAGCTGTGCAGCGGGGGGGGGTTTCCAGCAAAGCTGCCGGACAGGCCTGGTGTTCAGCA 1373
                                                         CCGGCTTCTCCTGCAACCAGGGCCGATACCCCCTCATCCAGACGCTACGGCAGGAACTGA
                                                                                             CCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTG
                                                                                                                                                                        GATTCTGTGTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCT
                                                                                                                                                                                      CETTCTGCCAGGGCAAAGCTGATGGGCTCTATCCCAATCCTCGGGAACGGTCCAGCTTCT
                                                                                                                                                                                                                     GGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24 cagettreatestectecteateatectatesectetectectaaactestectact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGCCCTTCATGCCTGACAACATCGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACAAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCATCGAATGGAACGATGTGACTCTACCAAGCTTTCAATGGCCTGAAAATAAGAACA
                                    CTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGICITGICCTIAIACTGAATTIGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Gray, Partick W.
APPLICANT: Tjoelker, Larry W.
TITLE OF INVENTION: CHITIN-BINDING FRAGMENTS
TITLE OF INVENTION: CHITIN-BSE CHITIN-BINDING FRAGMENTS
FILE REFERENCE: 27866/35407
CURRENT APPLICATION NUMBER: US/09/267,574
CURRENT FILING DATE: 1999-03-12
EARLIER FILING DATE: 1998-03-12
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 29.6%; Score 481; DB 4; I
Il Similarity 60.8%; Pred. No. 1.8e-131;
853; Conservative 0; Mismatches 520;
                                                                                                                                                                                                                                                                  CCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                                        1374 ACTCCTGCAAATGCTGCACCTGG 1396
                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09267574 Patent No. 6399571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: mat_peptide
; LOCATION: (65)..(1399)
US-09-267-574-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
NAME/KEY: CDS
LOCATION: (2)..(1399)
                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1636
                                                                                                                                                                                            1254
                                                                                                                                                                         1386
                                                                                                                                                                                                                                                                   1506
                                    1206
                                                         1098
                                                                                1266
                                                                                                      1158
                                                                                                                            1326
                                                                                                                                                  1215
                                                                                                                                                                                                                     1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
Matches 85
                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                  ò
                                                    g
                                                                              ŏ
                                                                                                g
                                                                                                                            à
                                                                                                                                             셤
                                                                                                                                                                     ò
                                                                                                                                                                                           g
                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        å
                         ä,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 966 CIGGICCIGCIGGCCCCIAIGCCAAGGAGICIGGGAICIGGGCIIACIACGAGAICIGIA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1026 CCTTCCTGAAAAATGGAGCCACTCAGGGATGGCATGCCCCTCAGGAAGTGCCTTATGCCT 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAAACCAAGGTCAGCT 1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1146 GGCTTAAGCACAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTCA 1205
                                                                                                                                                                                                                                                                                                                                      665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              977
                                                                                                                                                                                 264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG 323
                                                                                                                                                                                                                                                                                         545
                                                                                                                                                                                                                                                                                                                                                                       605
                                                                                                                                                                                                                                                                                                                                                                                                                                         563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         902
                                              185
                                                                                           TCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACC 245
                                                                                                                  143
                                                                                                                                      CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCA 305
                                                                                                                                                  425
                                                                                                                                                                                                                                                                             CCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC 485
                                                                                                                                                                                                                                                                                                                                                                                              503
                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                   AGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                  GACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTG
                                                                                                                                                                                                                                                                                                                          GCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                   CAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACT
                          Gaps
                         30;
                      Indels
                      Mismatches 520;
 Score 481; DB 4; 1 Pred. No. 1.8e-131;
                        ö
29.6%;
                         Conservative
            Similarity
                      853;
                                                                                        981
                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                  909
                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          804
                                             126
                                                                    54
                                                                                                                84
                                                                                                                                      246
                                                                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                384
                                                                                                                                                                                                                                                                                                                                                                                            444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624
  Ouery Match
            Best_Local
Matches 89
                                              à
                                                                  a
                                                                                       õ
                                                                                                            셤
                                                                                                                                      å
                                                                                                                                                        엄
                                                                                                                                                                                 à
                                                                                                                                                                                                       g
                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                         .g
                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

ë

185

83

143 305

245

365

```
GGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACA
                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 477.2; DB 2;
Pred. No. 2.4e-130;
); Mismatches 448;
                                                                                   1374 ACTCCTGCAAATGCTGCACCTGG 1396
                                                                    CCAGCTGTGATTGCTGCAACTGG 1528
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,839
FILING DATE: 07 - June - 1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                              America
                                                                                                                                                                  US/08486839
                                                                                                                                                                                                                                                                                     E: Hoffmann & Baron
350 Jericho Turnpike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Baron, Ronald J.
REGISTRATION NUMBER: 29,281
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                New York
United States of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ouery Match 29.4%;
Best Local Similarity 62.7%;
Matches 762; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (516) 822-3550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (516) 822-3582
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 1713 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                     TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                Sequence 5, Application
Patent No. 5928928
GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; HYPOTHETICAL: NO
US-08-486-839-5
                                                                                                                                                                                                                                                                                                                  Jericho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                       RESULT 10.
US-08-486-839-5
                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                  CITY: J
STATE:
               1446
                                                                    1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                            셤
               å
                                      q
                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CIGGICCIGCIGGCCCIAIGCCAAGGAGICIGGGAICIGGGCIIACIACGAGAICIGIA 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTCA 1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1038 ATCTGAAGCAGAGGACTGGGGGGGCCATGGTCTGGGCACTGGACTTAGATGACTTG 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGCACTITCTGCAACCAGGGCAAGTITCCCCTAATCTCCACCTGAAGAAGGCCCTCG 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTGCAGAGTGCAAGGTTGCACGGCTCCAGCTCAGCCCATTGAGCCAATAACTGCTGCTC 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGTGGCAGCGGGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTG 1385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTCTGTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGCAAATAACAGAAATGCCTTCT 1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1254 CGTTCTGCCAGGGCAAAGCTGATGGGCTCTATCCCAATCTCGGGAACGGTCCAGCTTCT 1313
                                                                                                          383
                                                                                                                                                                                                                                               665
                                                                                                                                                                                                                                                                                                   725
                                                                                                                                                                                                                                                                                                                              623
                                                                                                                                                                                                                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                            425
                                                      323
                                                                                 485
                                                                                                                                     545
                                                                                                                                                                                          605
                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                          563
                                                                                                                                                                                                                                                                                                                                                       ATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAGACAGCCCCC 785
                                                                                                                                                                                                                                                                                                                                                                                                              845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                     684 TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCCAGCCTCAACGTGGATGCTGCTGTGC 743
                                                                                                                                                  GCCAGCTGAAAACTCTCCTGGCCATTGGAGGTGGAACTTCGGGACTGCCCCTTTCACTG
                                                   264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG
                                                                              CCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC
                                                                                            GCCAGTATGAGTTTGACGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC
                                                                                                                                                                                          CTCCTCAGGACAAGCATCTCTTCACTGTCCTGCTGCAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                       AGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCA
                                                                                                                                                                                                                                                                666 TCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC
                                                                                                                                                                                                                                                                                                                           564 AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA
                                                                                                                                                                                                                                                                                                                                                                      TCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1086 ATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1158 GICTICCATACTIGCCTCAGGCACCCCAG---AGCTIGAAGTICCAAAACCAGGICAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1215 CCTCTGAACCTGAGCA
204
                           366
                                                                                                                                    486
                                                                                                                                                               384
                                                                                                                                                                                         546
                                                                                                                                                                                                                  444
                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                           786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              026
                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
6
                         ò
                                                                               ò
                                                                                                       a
                                                                                                                                    ò
                                                                                                                                                             윱
                                                                                                                                                                                       ò
                                                                                                                                                                                                               쉽
                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
1505
                                                                                                                                                                                                                                               its use
diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                 92 CTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CTGAGCTGCATCATGGTGCGGTCTGTGGCCTGGGCAGGTTTCATGGTCCTGCTGATGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                             A human chitinase, its recombinant production, its use for decomposing chitin, in therapy or prophylaxis against infection 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1713;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
```

INFORMATION

```
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGC 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1015 GATGATGTGGAGAGCTTCAAAACCAAGGTCAGCTATCTGAAGCAGAAGGGACTGGGCGGG 1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                   751
                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1052 GGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTAT 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTCCCCTAATCTCCACCCTGAAGAGGCCCTCGGGCCTGCAGAGTGCAAGTTGCACGGCT .1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1135 TACCCCCTCATCCAGACGCTACGGCAGGAACTGAATGGGTAAAGCCTTAACTGCCTGTCA 1194
            511
                                                                                                  931
                                                                                                                                                                                                                                                                                                                                                                                                             991
                                                                                                                                                                                                                                                                                                                                                                                                                                                          954
                                            451
                                                                                                                                TITGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTCACT 571
                                                                                                                                                                          GTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCC 631
                                                                                                                                                                                                                       691
                                                                                                                                                                                                                                                                                                            TCCTGGGAGGGCTACACTGGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGC 811
                                                                                                                                                                                                                                                                                                                                 TCTTGGGAGAAGGTCACGGGACATAACAGCCCCCTCTACAAGAGGCAAGAAGAGGAGGTGGT 720
                                                                                                                                                                                                                                                                                                                                                       AGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCA 871
                                                                                                                                                                                                                                                                                                                                                                            721 GCAGCAGCCAGCCTCAACGTGGATGCTGCTGTGCAACAGTGGCTGCAGAAGGGGACCCCT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCTGATGGTCACTGCTGCTGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAG
                                                                                                                                                                                                                                   ATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGC
                                                                                                                                                                                                                                                                             GTGGACAAAATGGCCCAGAACCTGGATTTTGTCAACCTTATGGCCTACGACTTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACCAAGCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATT
                                           GGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC
                                                                                     CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                  GCTGAGAAGCTCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCTCAGCCCATTG 1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGTGAGGCCAGGTG 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1195
                                                                                                          361
                                                                                                                                512
                                                                                                                                                                          572
                                                                                                                                                                                                481
                                                                                                                                                                                                                      632
                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                       812
                                                                                                                                                                                                                                                                                                                                                                                                 872
                                                                                                                                                                                                                                                                                                                                                                                                                                             932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1112
332
                                          392
                                                                301
                                                                                   452
                                                                                                                                                                                                                                                                692
                                                                                                                                                                                                                                                                                                            752
                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                   셤
                                          à
                                                           g
                                                                               ö
                                                                                                       g
                                                                                                                               à
                                                                                                                                                유
                                                                                                                                                                      ò
                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
```

RESULT 11 US-00-151-011-5 Sequence 5, Application US/09151011 ; Patent No. 6057142

```
무
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTAC 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        451
                Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTC 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 332 TACCAAGCITICAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATT 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
             Production, Its Use For Decomposing Chitin, Its Us
Therapy or Prophylaxis Against Infection Diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 CTGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           152 CAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       452 CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        512 TITGACTGGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1713;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
   A Human Chitinase, Its Recombinant
                                                                                                                                                                                                                                            #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 477.2; DB 3;
Pred. No. 2.4e-130;
0; Mismatches 448;
                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version SOFTWARE:
                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/09/151,011
                                                                                                                                                                                                                                                                                                                                                                             DIV
                                                                                                                                               America
                                                                                 Ę
                                                      STREET: 6900 Jericho Turnpike CITY: Syosset STATE: New Vol.
                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/15
FILING DATE: 10 - September
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                           MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                           NAME: Morriss, Robert C.
REGISTRATION NUMBER: 42,910
REFERENCE/DOCKET NUMBER: 294
TELECOMMUNICATION INFORMATION:
                                                                                                                                             oţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29.4%;
                                                                                                                                                                                                                                                                                                                                                                                                             (516) 822-3550
                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (516) 822-3582
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1713 base pairs
                                                                                                                              New York
: United States
                                                 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy of
                                                                CORRESPONDENCE ADDRESS: ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nucleic acid
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Similarity 762; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS
                                                                                                                                            COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-151-011-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Best Local S:
Matches 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
CITGACIGGGAGIACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGGCTICACA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGC 751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92 CIGACTGCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCCTTCGCTGGCATGACCACCACCACTGACTGAGTGGAATGACGAGTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332 TACCAAGCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 TACCAGGAGTTCAATGGCCTGAAGAAGATCCCAAGCTGAAGACCCTGTTAGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCTGATGGTCACTGCTGCTGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541 CGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTGGATACGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 creascrecarcaresresservists and a second s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCCAGTACCGGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCCACCTGATCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  272 GCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCCAAGCAGATCAACAAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     512 TITGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1713;
                                                                          PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 477.2; DB 4;
Pred. No. 2.4e-130;
); Mismatches 448;
                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/343,623
                                                                                                                                                                                                                           US/08/486,839
                       IBM PC compatible
                                                                                                                                                                                                                                                                                                 NAME: Baron, Ronald J.
REGISTRATION NUMBER: 29,281
REFERENCE/DOCKET NUMBER: 294-26
TELECOMUNICATION INFORMATION:
TELEPHONE: (516) 822-3550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29.4%;
                                                                                                                                                                       FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08,
FILING DATE: 07-JUNE-1995
ATTORNEY/AGENT INFORMATION:
     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (516) 822-3582 INFORMATION FOR SEQ ID NO: 5 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 1713 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: unknown MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                   OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 762; Conserva
                                                                                                    SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-343-623-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCAACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1052 GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTAT 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGGACAAAATTTGGAGGC 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1075 GCCATGGTCTGGGCACTGGACTTAGATGACTTTGCCGGCTTCTCCTGCAACCAGGGCCGA 1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCT 1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             992 GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: A human chitinase, its recombinant TITLE OF INVENTION: production, its use for decomposing chitin, its use TITLE OF INVENTION: in therapy or prophylaxis against infection diseases NUMBER OF SEQUENCES:
  CTTGACTGGGAGTACCCAGGAAGCCAGGGGAGCCCTGCCGTAGACAAGGAGCGCTTCACA 480
                                                                                                  540
                                                                                                                                                   691
                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                  751
                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                  811
                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    931
                                                                             632 AGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAG
                                                                                                                                                                                         541 CGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGCAGACCTATGTGGATGCTGGATACGAG
                                                                                                                                                                                                                                                692 ATCCCCCAACTGTCACAGTACCTGGACTACATGCCATGACGTGGCCTACGACCTCCATGGC
                                                                                                                                                                                                                                                                            GIGGACAAAAICGCCCAGAACCIGGATITIGICAACCTTAIGGCCTACGACTICCAIGGC
                                                                                                                                                                                                                                                                                                                                               TCCTGGGAGGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGC
                                                                                                                                                                                                                                                                                                                                                                            812 AGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781 GCCAGCAAGCTGATCCTTGGCATGCCTACGTACGGACGCTCCTTCACACTGGCCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCCTGGTGCAGGAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5, Application US/09343623
Patent No. 6303118
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: Hoffmann & Baron
STREET: 350 Jericho Turnpike
CITY: Jericho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGTGAGGCCAGGTG 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAGCTCAGCCCATTG 1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
US-09-343-623-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1135 '
                                                                                                                                                                                                                                                                                                                                               752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1172
                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 872
a
                                                 ð
                                                                                            셤
                                                                                                                                           ò
                                                                                                                                                                                         g
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

331

271

211

151

9

9

240

300

360

451

420 571

511

391

900

691

셤 ò 셤 à g à 유 ò 셤 ö g à a ö 음 à

```
CTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAG 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 347 ACCIGITIGGITCCAAAGGGITCCACCCIAIGGIGGAITCITCIACAICACGCIIGGAAI 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                579 TGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGA 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              399 GGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCGCTTCATGCCTGACAACATCGACCCCTGCTCTGTACCCCACCTGATCTACGCCTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   519 GGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGATCTACCCAGA------TCAGAAAGAAACACTCATTTCACTGTGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   512 TTCATGAGTTAGCAGAAGCCTTTCAGAAGGACTTCACAAAATCCACCAAGGAAAGGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639 TGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           599 AACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              759 A-----GGGCTACACTGGAGAGACAGCCCCCTCTACAAATACCCGACTGACACCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                  27;
                                                                                                                                                                                                                                                                                                                                                                                  Length 1433;
                                                                                                                                                                                                                                                                                                                                                                              Score 369; DB 1; Length 14
Pred. No. 1.4e-98;
0; Mismatches 445; Indels
                                                       ATG50017
                      NAME: Han, William T
REGISTRATION NUMBER: 34,344
                                                    REFERENCE/DOCKET NUMBER: AT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
TELEPRA: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                22.7%;
59.8%;
                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LEBNOTH: 1433 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: 1, 1, near
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                 1 Similarity 59.8 703; Conservative
                                                                                                                                               INFORMATION FOR SEQ ID NO:
                    Han, William T
                                                                                                                                                                                                                                                                                            ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                        ; FRAGMENT TYPE:
; ORIGINAL SOURCE:
US-08-694-915-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              467
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      692
                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                              TELEX
                                                                                                                                                                                                                                                                                                                                                                                                     Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
Pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                               992 GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                                                                                                                                                                                                                                                  1052 GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTAT 1111
                                                                                                                                                                                                                                                                                                                                                                                                                                        1112 GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGC 1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1075 GCCATGGTCTGGGCACTGGACTTAGATGACTTTGCCGGCTTCTCCTGCAACCAGGGCCGA 1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1232 TITCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCT 1291
                                                                                                                                                                                                                                                                                           661 retigggagaaggreargggacataacagcccccretacaagaggcaagaagagaggg 720
                                                                                                                                               811
                                                                                                                              AGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCA 871
                                                                                                                                                                                                   GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACAACTTCATCCTGAGCAACCCC 931
                                                                                                                                                                                                                                                                        932 TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGGCCCTATGCCAAG 991
                                                                                                                                                                                                                                                                                                                                                                              901 GAAGGAGGGATGCTGGCCTACTATGAAGTCTGCTCCT----GGAAGGGGGCCCACCAAA 954
GTGGACAAAATCGCCCAGAACCTGGATTTTGTCAACCTTATGGCCTACGACTTCCATGGC
                                                       752 TCCTGGGAGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GP39-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Adamou, Julie
APPLICANT: Kirkpatrick, Robert
APPLICANT: Rosenberg, Martin
TITLE OF INVENTION: HUMAN CARTILEGE
NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/694,915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEO Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/694,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/08694915
Patent No. 5811535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGTGAGGCCAGGTG 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1292 CCAGCTCAGCCCATTG 1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 19406-2799
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
US-08-694-915-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1195
                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
                                                                                                                                                                                                 872
```

셤

염

à

셤

à

158

Gaps

218

226

346

518 466 511

758

691

751

698

631

277

318 337

438

397

498 517 558 577 603 637 663 697 723 757 783 811 843 871 991

903 931

```
964 GAAACCACCG----TGGGGGCCCCTGCCTCTGGCCCTGGAGCTGCTGGACCCATCACAGAG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           992 GAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAG 1051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           904 TCAGAGAAGGTGGTCATGGGCATCCCCACATATGGGCACTCCTTCACACTGGCCTCTGCA 963
                                                                                                                                                                                                                                                                                       199 GGATCTGCCTACAAACTGGTTTGCTACTTTACCAACTGGTCCCAGGACCGGCAGGAACCA
                                                                                                                                                                                                                                                                                                                                               GCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                    578 GTGCAGGAAATGCGTGAAGCTTTTGAGCAGGACGCCAAGCAGATCAACAAGCCCAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                638 ATGGTCACTGCTGCAGTAGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAGATCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     698 CAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158 GGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTG
                                                                                                                                                                                                                                                                                                                          218 GGGCGCTTCATGCCTGACAACATCGACCCCTGCCTGTACCCCACCTGATCTACGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439 TACCTGTTTGGTTCCAAAGGGTTCCACCCTATGGTGGATTCTTCTACATCACGCTTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTTCACTGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          559 TGGATCTACCCAG-----ATCAGAAAGAAACACTCATTTCACTGTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724 AAACTGGCAAAAGATCTGGATTTCATCAACCTCCTGTCCTTTGACTTCCATGGGTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             758 GA-----GGGCTACACTGGAGAGAACAGCCCCTCTACAAATACCCGACTGACACGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               784 GAAAAGCCCCTTATCACTGGCCACAACAGCCCTCTGAGCAAGGGGTGGCAGGACAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      844 CCAAGCTCCTACTACAATGTGGAATATGCTGTGGGGTACTGGATACATAAGGGAATGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACATTCATCCTGAGCAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458 ITCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAG
                                                                                                                                                                                                                 27;
                                                                                                                                                                                 Length 1526;
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                Score 354.8; DB 1;
Pred. No. 2.2e-94;
0; Mismatches 417;
                                                                                                                                                                                21.8%;
60.2%;
                                                                                                                                                                                                                   Conservative
nucleic acid
                                 linear
                                                                                                                                                                                                  Similarity
                STRANDEDNESS: 6
TOPOLOGY: line
MOLECULE TYPE: CI
                                                                     2
                                                                                                      FRAGMENT TYPE:
ORIGINAL SOURCE:
US-08-694-915-3
                                                                                         ANTI-SENSE: NO
                                                                                                                                                                                Query Match
Best Local Simi
Matches 672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          398
                                                                                                                                                                                                                                                                                                                                                                                               278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      518
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                 .
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음
                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                       1112
                                                                                                                                                                                                                                                                                                                          1045
                                                                                                                                                                                                                                                                                                                                                                               1106 CCATGATCTGGTCTATTGACATGGATGACTTCACTGGCAAATCCTGCAACCAGGCCCCTT 1165
                                                                                                                                                                                                               993 AGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAATGGAGCCACTCAGG 1052
GCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAG 872
                               CAAGCTCCTACTACAATGTGGAATATGCTGTGGGGTACTGGATACATAAGGGAATGCCAT
                                                                   CTGAGAAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCCT
                                                                                        CAGAGAAGGTGGTCATGGCGCATCCCACATATGGCCACTCCTTCACACTGGCCTCTGCAG
                                                                                                                                          933 CCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAGG
                                                                                                                                                                 GATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGGGTTGGCTATG
                                                                                                                                                                                                                                                                                                                      ACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                 CCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Adamou, Julie
APPLICANT: Kirkpatrick, Robert
APPLICANT: Rosenberg, Martin
TITLE OF INVENTION: HUMAN CARTILEGE GP39-LIKE GENE
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1233 TTCCCCTAATCTCCACCTGAAGAAGGCCCTCGGC 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCCTCTTGTCCAAGCAGTCAAGAGAAGCCTTGGC 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/694,915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08694915
Patent No. 5811535
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SYSTEM: DOS|
FastSEQ Version 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Han, William T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 34, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA
APPLICATION NUMBER: US
FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1526 base pai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19406-2799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-694-915-3
                                                                                                                                                                                                                                                   929
                                                                                                                                                                                                                                                                                     1053
                                                                                                                                                                                                                                                                                                                                                                                                                               1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                             g
                                                                   ç
                                                                                                     셤
                                                                                                                                        ò
                                                                                                                                                                          g
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

```
1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1085 TATCAGGGCAATGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1025 ACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCC 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1145 TGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTC 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       965 GCTGGTCCTGCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACTACGAGATCTGT 1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    971
                                                                                                                      332
                                                                                                                                                                                                                                                                                                                                   604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         911
 212
                                                           272
                                                                                                                                                                                                                                            452
                                                                                                                                                                                                                                                                            544
                                                                                                                                                                                                                                                                                                        506
                                                                                                                                                                                                                                                                                                                                                                                                                             614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      304
                                                                                         364
                                                                                                                                                    424
                                                                                                                                                                                  333 CCCAACCTGAAGACTCTCTTGTCTGTCGGAGGATGGAACTTTGGGTCTCAAAGATTTTCC 392
                                                                                                                                                                                                             484
                                                                                                                                                                                                                                                                                                                                                                   557
                                                                                                                                                                                                                                                                                                                                                                                                  664
                                                                                                                                                                                                                                                                                                                                                                                                                                                             665 ATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATC 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153 TACACCAGCTGGTCCCAGTACCGGGAAGGCGATGGGAAGCTGCTTCCCAGATGCCCTTGAC
                               CCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACC
                                                 ACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAATAAGAAC
                                                                                                          365 AGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGGAACTTCGGGACTTGCCCTTTCACT
                                                                                                                                                                                                               GCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTG
                                                                                                                                                                                                                               485 CGCCAGTATGAGTTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGC
                                                                                                                                                                                                                                                                                           545 CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                   -----GACAAACACCATTTTACCACCCTAATCAAGGAAATGAAGGCCGAATTTATA
                                                                                                                                                                                                                                                                                                                                                                                                  605 CAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                   515 AAGGTCACCATTGACAGCAGCTATGACATTGCCAAGATATCCCAACACCTGGATTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            795 GGGTACATGTTGAGGCTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATCCCCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            905 GGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       855 GGGAGGAGCTTCACTCTG---GCTTCTTCTGAGACTGGTGTTCCAGCGCCAATCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1029 ACCAAGGGCAACCAGGGGAGGTAGGATACGACGAGGAAAGCGAAAAGCAAGGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1089 TACCTGAAGGATGGCAGCTGGCAGCGCCCATGGTATGGGCCCTGGACCTGGATGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1205 ACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATCTCCCACCCTGAAGAAGG 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Search completed: July 3, 2003, 08:43:18
Job time: 83.4127 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   785 /
                                                                                         305
                              245
                                                                                                                                                                                                                                                                                                                                                                   507
                                                         g
                                                                                                                                                                             do
Q
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                           δ
                                                                                         ò
                                                                                                               g
                                                                                                                                                    ò
               1111
                                            1137
                                                                         GACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGGAACAAAATTTGGAGGC 1171
                                                                                          GCCATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAG 1231
                                                                                                                                                  185 TTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATGGAC 244
                                                                                                                                                                                                                                                                                     Sequence 4, Application PC/TUS9407754
GENERAL INFORMATION:
APPLICANT: THE RECENTS OF THE UNIVERSITY OF CALIFORNIA
TITLE OF INVENTION: ASSAY FOR YKL-40 AS A MARKER FOR
TITLE OF INVENTION: DEGRADATION OF MAMMALIAN CONNECTIVE TISSUE MATRICES
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
STREET: 1880 CENTURY PARK EAST, FIFTH FLOOR
CITY: LOS ANGELES
STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTAC 184
               GGATGGGATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTAT
                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 = - - = =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                1232 TITCCCCTAAICTCCACCCTGAAGAAGGCCCTCGGC 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 339.8; DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 6e-90;
); Mismatches 442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US94/07754
FILING DATE: 08-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: HOWELES, STACT L.
REGISTRATION NUMBER: 34,842
REFERENCE/DOCKET NUMBER: FD 3:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/455-5100
TELEPAX: 619/455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20.9%;
58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1681 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      al Similarity 58.9
669; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
135..1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLONE: YKL-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                        PCT-US94-07754-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US94-07754-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
              1052
                                                                                                                                    1172 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125
                                           1078
                                                                         1112
                                                                                                    1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                               a
                                       g
                                                                                                    g
                                                                                                                                  ò
                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
              ò
                                                                       ö
                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

Scoring table:

Searched:

Perfect score:

Sequence:

OM nucleic

ö

```
Sequence 2, Application US/10004219B
Publication No. US20030087414A1
GENERAL INFORMATION:
APPLICANT: Macrozyma
APPLICANT: Macrozyma
APPLICANT: Macrozyma
APPLICANT: Boot, Rolf G.
APPLICANT: Boot, Rolf G.
TITLE OF INVENTION: A mammalian mucinase, its recombinant production, and
TITLE OF INVENTION: A mammalian production and
TITLE OF INVENTION: Wich mucus is involved or infection diseases
FILE REFERENCE: 2183-5136US
CURRENT APPLICATION NUMBER: US/10/004,219B
CURRENT FILING DATE: 2001-11-02
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Description of Artificial Sequence: human AMCase OTHER INFORMATION: cDNA sequence and deduced amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
OTHER INFORMATION: Description of Combined DNA/RNA Molecule: human
OTHER INFORMATION: AMCase cDNA sequence and deduced amino acid
OTHER INFORMATION: sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 9; Length 1625;
                                                                                                    US-09-960-352-10161
US-09-960-352-14460
US-09-960-352-1189
US-09-960-352-1882
US-09-960-352-1882
US-09-960-352-1882
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
US-09-960-352-10172
                                                                                                                                                                                                                                                                                           US-09-918-995-8214
US-09-960-352-2361
US-09-960-352-8317
            US-10-218-743-20
US-10-218-743-22
US-10-218-743-17
US-10-218-743-19
US-10-218-743-14
US-10-218-743-16
                                                                                                                                                                                                                                                                                                                                          US-10-218-743-40
US-10-218-743-42
US-10-218-743-37
US-10-218-743-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 1625;
100.0%; Pred. No. 0;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                             Query Match
Best Local Similarity 100.
Matches 1625; Conservative
427
116608
116608
11752
1752
1752
410
4233
4233
4233
4233
4233
4233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: (104)..(1531)
.US-10-004-219B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGIH: 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-004-219B-2
112
1111.8
1111.8
1111.8
1111.8
1111.8
1111.8
1111.8
1109.2
108.2
108.2
108.2
108.2
106.8
                                                                                                                                                                                                    107.6
106.8
106.6
106.6
105.4
105.2
105.2
103.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
ပ
                                                                                                                                                                                                                                                                                                                                                                                           O
                                                                                                                   00000
                                                                                                                                                                                                                  υυ
                                                                                                                                                                                                                                                              ບບ
                                                                                                                                                                                                                                                                                                                               O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 402, App
Sequence 678, App
Sequence 4, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 2589, Appli
Sequence 13050, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2589, Ap
Sequence 13050, A
Sequence 3072, Ap
Sequence 7364, Ap
Sequence 3057, Ap
Sequence 14919, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Appli
Sequence 3, Appli
Sequence 14, Appl
Sequence 44, Appl
                                                                                                                         (without alignments)
8891.723 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                1 gctttccagtctggtggtga......ttgcaataaaatcagcagtc 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                       July 3, 2003, 05:03:26; Search time 285.278 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptodata/1/pubna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubna/PCT_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US06_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US06_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/PCTUS_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US08_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US09_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubna/US00_NEW_PUB.seq:*
              GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-004-219B-2
US-10-004-219B-3
US-10-202-456A-14
US-10-203-456A-14
US-09-340-44
US-09-352-830A-402
US-09-262-213A-4
US-09-262-213A-8
US-09-960-352-3569
US-09-960-352-3569
US-09-960-352-3564
US-09-960-352-14919
US-09-960-352-14919
US-09-960-352-14919
US-09-960-352-365
US-09-960-352-3515
US-09-960-352-3515
US-09-960-352-3515
US-09-960-352-3515
                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                            1085931 segs, 780495707 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published_Applications_NA:*
                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                        - nucleic search, using sw model
                                                                                                                                                                                                                                 IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                US-10-004-219B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1681
1474
1475
415
410
410
424
411
399
427
427
424
424
427
424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match
```

••

Database

ö

0; Gaps

0; Indels

8 9

GCTTTCCAGTCTGGTGGTGAATCCTCCATAGTCTGAAGCCTTTGTGATAACCACAGAATC

셤 ð

ò

Sequence 265, App Sequence 3315, Ap Sequence 5721, Ap Sequence 4979, Ap

1625 1041 708.8 349.4 348.4 348.2 338.2 338.2 281.2 139.4

Score

Result No.

135.2 135.2 135.2

122

120.2 113.6 112.4 112.4

υ

61 AGAACATATAAAAAGCTCTGCGGGACTGGTGCTGCAACCATGACAAGCTTATTCT 120

QY 1244 TCCACCCTGAAGAAGGCCCTGCAGAGTGCAAGTTGCACGGCTCCAGCCC 1303	RESULT 3 US-10-202-436A-14 Sequence 14, Application US/10202436A Sequence 14, Application US/10202436A Belication No. US20030049261A1 GENERAL INFORMATION: APPLICANT: ELIAS, JACK A TILE OF INVENTION: METHODS COMPOSITIONS AND KITS RELATING TO CHITINASES AND CHIT TILE OF INVENTION: MOLECULES AND INFLAMMATORY DISEASE FILE REFERENCE: 044574-5107 CURRENT FILING DATE: 2002-10-17 PRIOR PILICATION NUMBER: US. 06/307,432 PRIOR FILING DATE: 2001-07-24 NUMBER OF SEQ ID NOS: 14 SOFTWARE: Patentin version 3.1 SOFTWARE: Patentin version 3.1 SOFTWARE: Attificial FEAUTHER: COTHER INFORMATION: AMCase sense in situ hybridization probe US-10-202-436A-14	Query Match 43.6%; Score 708.8; DB 9; Length 1038; Best Local Similarity 93.8%; Pred; No. 6.3e-225; Matches 784; On Mismatches 42; Indels 10; Gaps 4; Qy 769 TGGAGAGARCAGCCCCTCTACAAATACCGGACTGACACGCCTACCTCAA 60 B29 TGGAGAATATGTCATGAACTACTGAAGGACACGCCACGC
164 GCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGC 223 [1111	ACCTCAGTCAAAATTCCTGCGCCAGTATGACTGGGCTGGACTTTGACGGGTGGGAA	### ##################################

```
1026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1084
                                                                                                                                                                          184
                                                                                                                                                                                                                                   244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    996
                                                                                                                                                                                                     207
                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                           304
                                                                                                                                                                                                                                                                                                                       327
                                                                                                                                                                                                                                                                                                                                                    364
                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                       447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    604
                                                                                                                                                                                                                                                                                                         268 CGCTTCCTCTGTACCCACATCATCTACACCTTTGCCAATATAAGCAACGATCACATCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------GACAAACAGCAITITACCACCCTAAICAAGGAAAIGAAGGCGAAIITATA
                                                                                                                                                                                                                                  ACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAATAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                            365 AGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            665 ATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               730 AGCATCATGACCTACGATTTTCATGAGCCTGGCGTGGGACCACAGGCCATCACAGTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               850 GGGTACATGTTGAGGCTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATCCCCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    910 GGGAGGAGCTTCACTCTG---GCTTCTTCTGAGACTGGTGTTGGAGCCCCAATCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTTCCTGAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCC
                                                                                                                                                                          125 ACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTAC
                                                                                                                                                                                                      148 ACAGGCTTTGTGGTCCTGGTGCTGCTCCAGTGCTGCTGTGCATACAAACTGGTTGCTAC
                                                                                                                                                                                                                                                             208 TACACCAGCTGGTCCCAGTACCGGGAAGGCGATGGGAGCTGCTTCCCAGATGCCTTGAC
                                                                                                                                                                                                                                                                                           CCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                             425 GCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   545 CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             605 CAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCTGCAGTAGCTGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     725 CATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAAACAGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGGATTATGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGTTCCGAGGTCAGGAGGATGCAAGTCCTGACAGATTCAGCAACACTGACTATGCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGTCCTGCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ccessaattccassccsstrcaccaassasscasssasccrtscctactatsasatcts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        508 CGCACCCATGGCTTTGATGGGCTGGACCTTGCCTGGCTCTACCCTGGACGAGA----
                                                                                                                                              Gaps
                                                                                                                                             24;
                                                                                                                   Length 1925;
                                                                                                                                              Indels
                                                                                                                 Score 349.4; DB 9;
Pred. No. 3.7e-105;
); Mismatches 436;
NUMBER OF SEQ ID NOS: 363
SOFTWARE: FastSEQ for Windows Version
                                                                                                                                              ö
                                                                                                                   21.5%;
59.5%;
                                                                                                                                 Best Local Similarity 59.5
Matches 675; Conservative
                                                                        ORGANISM: Homo sapiens
                                                                                                                               Similarity
                                            1925
                                                                                      US-10-097-340-44
               SOFTWARE: F
                                                                                                                                                                                                                                                                                          245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       785 (
                                                                                                                                                                                                                                                                                                                                                                               328
                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 562
                                                                                                                                                                                                                                                                                                                                                    305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1025
                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              296
                                            LENGTH:
                                                                                                                                                                           ò
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nd Proteins For The Identification, and Therapy of Ovarian Cancer
                                                                                                                                                                                                                                                                                                                                                    1538
 1188
                                                         1248
                                                                                                                 1308
                                                                                                                                                                                                                                   1426
                                                                                                                                                                                                                                                                                           1479
                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                780
                            420
                                                                                     480
                                                                                                                                              540
                                                                                                                                                                                                                                                                                                           GACCTGGTCTATATTCCCTAGAGTTCCAGTCTTTTTGCTTAGGACATGTTGCCCC 1594
 CGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCAT
               TGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCCTAATCTCCAC
                                                                                                                                                                                         CAGCTCGGGAGGCAGTGT--GTGCTGTCAGAGCCAACGGCTCTACCCCGTGGCA
                                                                                                                                                                                                                                                             CAGCTCGGGAGGCAGTGGATTCTTGTGCTTGGCAGAGCAAACGAGCTCTAACCCCGTGGG
                                                                                                                                                                                                                                                                                          AATA----ACAGAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAG--CAGAA
                                                                                                                                                                                                                                                                                                                                                  CTGCCAGGCCGGGCTTGT-CTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACCT
                                                                                                                                                                                                                                                                                                                                                                 836
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Nosemarie SCHMANDT
APPLICANT: Xumei ZHAO
APPLICANT: Karen GLATT
TITLE OF INVENTION: Nacleic Acid Molecules and F
TITLE OF INVENTION: Assessment, Prevention, and
TITLE OF INVENTION: Nacleic Acid Molecules and F
TITLE OF INVENTION: Nucleic Acid Molecules and F
TITLE OF INVENTION: Nucleic Acid Molecules and F
TITLE OF INVENTION: NUMBER: 05/10/097,340
CURRENT FILING DATE: 2001-03-14
PRIOR PLICATION NUMBER: 60/276,025
PRIOR APPLICATION NUMBER: 60/325,149
PRIOR FILING DATE: 2001-09-26
PRIOR PLILING DATE: 2001-09-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R APPLICATION NUMBER: 60/311,732
R FILING DATE: 2001-08-10
R APPLICATION NUMBER: 60/325,102
R FILING DATE: 2001-09-26
R APPLICATION NUMBER: 60/323,580
R PILING DATE: 2001-09-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 44, Application US/10097340
Publication No. US20030087250A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Manjula GANNAVARAPU
Sebastian HOERSCH
Shubhangi KAMATKAR
Steve G. KOVATS
Rachel E. MEYERS
Michael MORRISEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gordon B. MILLS
Robert C. BAST, Karen LU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peter OLANDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: John MONAHAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peter VEIBY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-097-340-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                        1189
                                                                                                                1249
                                                                                                                                             481
                                                                                                                                                                          1309
                                                                                                                                                                                                   541
                                                                                                                                                                                                                                1369
                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                          1539
                                                                                   421
                                                                                                                                                                                                                                                                                          1427
                                                                                                                                                                                                                                                                                                                                                  1480
                            361
                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
 à
                         g
                                                      ö
                                                                                셤
                                                                                                              ò
                                                                                                                                          셤
                                                                                                                                                                        ö
                                                                                                                                                                                                q
                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                 QQ
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                   a
```

q		qq	
6 6 7	1085 TATCAGGGCAATGTGTGGGTTGGCTATGACATCAAGAGCTTCGATATTAAGGCTCAA 1144 	Oy Oy	486 GCCAGTATGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCC 545
ý a	1145 IGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTC 1204 	Oy do	546 CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAAATGCGTGAAGCTTTTGAGC 605
g ç	1205 ACTGGCACTITCTGCAAGCAAGGTTTCCCCTAATCTCCACCCTGAAGAAGG 1259 	ov do	606 AGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCA 665
RESULT US-09-	RESULT 5 US-09-822-830A-402	λο.	666 TCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCC 725
Bate Bate GENE	Sequence 40., Application US/U982283UA Patent No. US/20020142952Al GENERAL INFORMATION: APPLICANT: Genetics Institute, Inc.	QQ Dp	726 ATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAACA 779
A APF		OY .	780 GCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGGTTATG 839
APE		λ _O	840 TCATGAACTACTGGAAGGACAATGGAGCACCAGAGAAGCTCATCGTTGGATTCCCTA 899
COR	TILLE OF INVENTION: POLINGUEDOTILES ENCOLING NOVEL SECRETED PROTEINS CURRENT APPLICATION NUMBER: US/09/822,830A CURRENT FILING DATE: 2001-03-29	λο qa	900 CCTATGGACACAACTTCATCCTGAGCAACCCTCCAACACTGGAATTGGTGCCCCCACCT 959
PRIOR SOFTW	FALLOR AFFLICATION UNDER: 00/153,004 NUMBER OF SEQ ID NOS: 631 SOFTWARE: Patentin Ver. 2.0	da da	960 CTGGTGCTGGTCCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGA 1019
A T T T T T T T T T T T T T T T T T T T	LENGTH: 1391 TYPE: DNA TYPE: DNA PROGNISM: Homo sapiens	QV DD	1020 TCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGCGTGCCCTCAGGAAGTGCCTT 1079
, N ; CC ;	FEATURE: misc_feature LOCATION: 1353_ OOTHER INFORMATION: n=a,c,g, or t	Qy DD	1080 ATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGG 1139
Quer Best Matc	Query Match Best Local Similarity 59.2%; Pred. No. 6.6e-105; Matches 680; Conservative 0; Mismatches 441; Indels 27; Gaps 4;	Qy	1140 CTCAATGGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGGCCCATTGATCTGGATG 1199 111
oy o	126 CAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGCTGCACT 18	Qy Dp	1200 ACTICACIGGCACITICIGCAACCAGGGCAAGTITCCCCIAAICICCCIGAAGAGG 1259
6 6	186 TCACCAACTGGGCCCAGTACCGGCCCAGGGCGCTTCATGCCTGACAACATCGACC 245 	oy O	1260 CCTCGGC 1267 1154 GCCTTGGC 1161
oy G	246 CCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGGGCAGAACAACGAGATCACCA 305	RESULT US-09-5	RESULT 6 US-09-960-352-678 ; Sequence 678, Application US/09960352
9y.	306 CCATCGAATGGAACGATGTGACTCTACCAAGCTTTCAATGGCCTGAAAATAAGAACA 365 	, GENEI , GENEI , APPI	Pacen No. USZUZZUJI/139A1 APPLICANT: Warren, Wesley C. APPLICANT: Tao, Nengbing .
දු පු	366 GCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTG 425 	APP APP TITI	APPLICANT: Mathial JOHN C. APPLICANT: Mathial ON NGABPBAN TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION ANI TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
ζ	426 CCATGGTTTCTACTCCTGAGAACGGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGC 485	; FILL	: REFERENCE: 16511.006/37-21(10298)C ENT APPLICATION NUMBER: US/09/960,352

à g à g

g

à

셤

ò

q

à

셤

ö g

δ

```
1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCAAGGGCAACCAGTGGGTAGGATACGACGACCAGGAAAGGGTCAAAAGCAAGGTGCAG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1085 TATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1025 ACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCAGGAAGTGCCTTATGCC 1084
                                                                                                                        184
                                                                                                                                                  244
                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                                                                                                     272
                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393 AAGATAGCCTCCAACACCCAGAGTCGCCGGACTTTCATCAAGTCAGTACCGCCATTTCTG 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTG 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGC 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGGTCACCATTGACAGCTATGACATTGCCAAGATATCCCAACACCTGGATTTCATT 674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                675 AGCATCATGACCTACGATTTTCATGGCGCCTGGCGTGGGACCACAGGCCATCACAGTCCC 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               735 CTCAGGCGAGGTCAGGAGGATGCAAGTCCTGACAGTTCAGCAACACTGACTATGCTGTG 794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        795 GGGTACATGTTGAGGCTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATCCCCACCTTC 854
                                                                                                                                                                                                                                                                                                                                  125 ACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTAC
                                                                                                                                                                                                                 185 TTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGGCGCTTCATGCCTGACAACATCGAC
                                                                                                                                                                                                                                         ------GACAAACACCATTTTACCACCCTAATCAAGGAAATGAAGGCCGAATTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           912 CCGGGAATTCCAGGCCGGTTCACCAAGGAGCCAGGGACCCTTGCCTACTATATGAGATCTGT
                                                                                                                                                                                                                                                                                                            CCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                       ACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAATAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              365 AGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  558 AAGGAAGCCCAGCCAGGGAAAAAGC---AGCTCCTGCTCAGCGCAGCACTGTCTGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAACAGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             845 AACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTCATCGTTGGATTCCCTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGAGGAGCTTCACTCT---GCTTCTTCTGAGACTGGTGTTCCAGCGCCCAATCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 965 GCTGGTCCTGCTGGCCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGT
                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1681
                                                                          24;
                                                                          Indels
                               DB 10;
                            Score 338.2; DB 1
Pred. No. 1.8e-101
0; Mismatches 443
                        tch 20.8%;
al Similarity 58.9%;
66%; Conservative
                            Query Match
Best Local Si
Matches 668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1029
                                                                                                                                                                                                                                                                                                            245
                                                                                                                                                                                                                                                                                                                                                                                                       305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      725
                                                                                                                        ò
                                                                                                                                                            g
                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ·δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               198
                                                                                                                                                                                                                                                                                                                                                                                                     258
                                                                                                                                                                                                                                                                                                                                                                                                                           438
                                                                                                                                                                                                                                                                                                                                    20 TCTGCCGAATGCTCAGCTAGGTTCTGCCTACCAGCTGGTATGCTACTTCTCTAACTGGGC 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        139 TATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                   CCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           259 CCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence:cDNA nucleotide control of The Theorem of the gene for color of the gene for the INFORMATION: YKL-40 US-09-215-0778-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09215077A,
Sequence 4, Application US/09215077A,
Patent No. US20020031793A1
GENERAL INCRMATION:
APPLICANT: PRICE, PAUL A.
APPLICANT: PRICE, PAUL A.
TITLE OF INVENTION: ASSAY FOR YKL-40 AS A MARKER FOR DEGRADATION OF TITLE OF INVENTION: MAMMALIAN CONNECTIVE TISSUE MATRICES
TITLE OF INVENTION: MAMMALIAN CONNECTIVE TISSUE MATRICES
TITLE OF INVENTION: MAMMALIAN CONNECTIVE TISSUE MATRICES
CURRENT FILING DATE: 1996-12-18
PRIOR APPLICATION NUMBER: 1096-12-18
PRIOR APPLICATION NUMBER: 108/581,527
PRIOR APPLICATION NUMBER: 108/089,989
PRIOR FILING DATE: 1996-4-17
PRIOR FILING DATE: 1993-07-09
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PATENTIN VOY: 2
SEQ ID NO 4
SEQ ID NO 
                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                 Length 449;
                                                                                                                                                                                                                                                              Indels
                                                                                                              ; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 03-LIB34-081-Q1-E1-A111
US-09-960-352-678
                                                                                                                                                                                                              Score 342; DB 10;.
Pred. No. 4.6e-103;
                                                                                                                                                                                                                                                          0; Mismatches
  2001-09-24
15112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                              21:0%;
87:2%;
                                                                                                                                                                                                              Query Match 21.(
Best Local Similarity 87.2
Matches 375; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11111111
440 GCATCTCTTC 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCATCTCTTC 568
CURRENT FILING DATE:
NUMBER OF SEQ ID NOS:
SEQ ID NO 678
LENGTH: 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-215-077A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGIH: 1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499
                                                                                             TYPE: DNA
```

674

854 964

```
APPLICANT: Vasanthakamur, Geetha
APPLICANT: Vasanthakamur, Geetha
APPLICANT: Dotson, Stanton
APPLICANT: Ma, Xiao-Jun
TITLE OF INVENTION: Osteoarthritis tissue-derived nucleic acids, polypeptides,
TITLE OF INVENTION: vectors, and cells
FILE REFERENCE: SO-3221 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1029 ACCAAGGGCAACCAGGGTAGGATACGACGACCAGGAAGCGTCAAAAGCAAGGTGCAG 1088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1085 TATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAA 1144
                                                                                                                                                                                                                                                                                                                                                    965 GCTGGTCCTGCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGT 1024
                                                                                                                                                                                                                                                                                                                                                                                                                   1025 ACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGGATGCCCCTCAGGAAGTGCCTTATGCC 1084
                                                                                                                                                                                                                                                                                                                                                                                   971
                                                                                                                           734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                784
                                                                                                                                                                                                                                                                                                                    911
                                                                                                                                                                                       735 CICAGGCGAGGICAGGAGGAIGCAAGICCIGACAGAIICAGCAACACIGACIAIGCIGIG 794
                                                                                                                                                                                                                        614
                                                                                                               558 AAGGAAGCCCAGCCAGGGAAAAAGC---AGCTCCTGCTCAGCGCAGCACTGTCTGCGGGG
                               665 ATCTCCAATATCCAGTCTGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATC
                                              725 CATGICATGACCTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAAACAGCCCC
                                                                                                                                                            CTCTACAAATACCCGACTGACACCGCCAGCAACGCCTACCTCAATGTGGATTATGTCATG
                                                                                                                                                                                                                                                      795 GGGTACATGTTGAGGCTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATCCCACCTTC
                                                                                                                                                                                                                                                                                        905 GGACACAACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCCACCTCTGGT
                                                                                                                                                                                                                                                                                                        1205 ACTGGCACTTTCTGCAACCAGGCAAGTTTCCCCTAATCTCCACCTGAAGAAGG 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1149 CAGGGCTCCTTCTGCGGCCAGGATCTGCGCTTCCCTCTCACCAATGCCATCAAGG 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 281.2; DB 10;
Pred. No. 1.6e-82;
0; Mismatches 423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/765,231A CURRENT FILING DATE: 2001-01-18 SEQ ID NOS: 82 SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 8, Application US/09765231A; Patent No. US20020119452A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Searle-Monsanto
APPLICANT: Phippard, Deborah
APPLICANT: Vasanthakamur, Geetha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17.3%;
Llarity 59.4%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al Similarity
667; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo US-09-765-231A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-765-231A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Si
Matches 667;
                                                                                                                                                            785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                            g
                                                                                               à
                                                                                                                        g
                                                                                                                                                           ö
                                                                                                                                                                                          원
                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                  ф.
                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                       ò
                  TGGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGGGCCATTGATCTGGATGACTTC 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAGGCTITGTGGTCCTGCTGCTCCTGTGCTGCTTCTGCTAACTGGTCTGCTAC 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193 AAGATAGCCICCAACACCCAGAGICGCCGGACTITCATCAAGICAGTACCGCCATITCIG 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAATAAGAAC 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAG 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGGTGGC 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACC 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGC
                                                             1205 ACTGGCACTITCTGCAACCAGGGCAAGTITCCCCTAATCTCCACCCTGAAGAAGG 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1149 CAGGGCTCCTTCTGCGCCAGGATCTGCGCTTCCCTCTCACCAATGCCATCAAGG 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: PRICE, FAUL
APPLICANT: JOHANSEN, JULIA
TITLE OF INVENTION:
TITLE OF INVENTION ASSAY FOR YKL-40 AS A MARKER FOR DEGRADATION OF
TITLE OF INVENTION: MAMMALIAN CONECTIVE TISSUE MATRICES
FILE REFERENCE: 407T-8954120S
CURRENT APPLICATION NUMBER: US/09/262,213A
PRIOR APPLICATION NUMBER: US 08/089,989
PRIOR FILING DATE: 1993-07-09
PRIOR FILING DATE: 1994-07-08
                                                                                                                                                                                                                                                          Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 338.2; DB 10;
Pred. No. 1.8e-101;
); Mismatches 443;
                                                                                                                                                                           Sequence 4, Application US/09262213A Patent No. US20020090658A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 4
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 20.8%;
Best Local Similarity 58.9%;
Matches 668; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: HOI
US-09-262-213A-4
                                                                                                                                                            US-09-262-213A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEO ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                             ð
                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
 à
```

10;

æ

```
8.6%;
                                                                                                                                                                                                                                                                                    Best Local Similarity 61.4 Matches 224; Conservative
                        Sequence 2589, Application
Patent No. US20020137139A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     547 TCCTC 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCATC 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-960-352-13050
                                                                                                                                                                                                                                                 US-09-960-352-2589
                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                            72
                                                                                                                                                                                                                                                                                                                                                                                                                                             132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    487
                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                      247
                                                                                                                                                                                                                                                                                                                                                                                                                     307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                          QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                     δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1046 ACTCAGGGATGGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTT 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         951 ACAGAGTCTTCAGGCTTCCTGGCCTATTATGAGATCTGCCAGTTCCTGAAA---GGAGCC 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGAGCCATGATCTGGTCTATTGACATGGATGACTTCACTGGCAAATCCTGCAACCAG 1187
                                                                                                                                                                                                                                                                                                633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247
                                                334
                                                                                                CAAGCTTTCAA-TGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGG 393
                                                                                                                         367
                                                                                                                                                                         427
                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                  573
                                                                                                                                                                                                                                                                                                            GCTGATGGTCACTGCTGCA-GTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGA 692
                                                                                                                                                                                                                                                                                                                                                                                            TCCCCCAACTGTCACAGTACCTGGACTACCATGTCATGACCTACGACCTCCATGGCT 752
                                                                                                                                                                                                                                                                                                                                                                                                         CCTGGGA-----GGGCTACACTGGAGAGAACAGCCC-CCTCTACAAATACCCGACTGAC 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  713 CTTGGGAAAAGCCCCTTATCACTGGCCACAACAGCCCTGCTGAGCAAGGGGTGGCAGGAC 772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGCGCTTCATGCCTGAC-AACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCT 275
                                                                                                                                                AGCCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCA 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       926 AACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGGCCCTAT
                       276 T-TGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTAC
                                                             GACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTT
                                                                                                                                                                                                                       GGAATTCATTAACTCCATAATCCTGTTTCTGAGGAACCATAACTTTGATGGACTGGATGT
                                                                                                                                                                                                                                               TGACTGGGAGTACCCTGGGCTCTCGTGGGAGCCCTCCAGGACAAGCATCTCTTCACTGT
                                                                                                                                                                                                                                                                      488 AAGCTGGATCTACCCAG------ATCAGAAAGAAAAACACTCATTTCACTGT
                                                                                                                                                                                                                                                                                               CCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAG
                                                                                                                                                                                                                                                                                                                                                           ACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           866 GCACCAGCTGAGAAGCTCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCAAGGAGTCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1008 AAGATCACGCGCCTCCAGGATCAGCAGGTTCCCTACGCAGTCAAGGGGAACCAGTGGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTATGACAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCAAGTTTCCCCTAATCTCCACCTGAAGAAGGCCCTCGGC 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCCTTACCTTTTTCAAGCAGTCAAGAGAAGCCTTGGC 1229
                                                                                              335
                                                                                                                                                                       368
                                                                                                                                                                                                                                                                                                                                                                                                                   653
                                                                                                                                               394
                                                                                                                                                                                                454
                                                                                                                                                                                                                       428
                                                                                                                                                                                                                                                                                                                                            634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1188
                     셤
                                                                                                                       g
                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                 g
ð
                                               ò
                                                                                              ò
                                                                                                                                               ò
                                                                                                                                                                    g
                                                                                                                                                                                               ò
                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                            å
                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298).
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT APPLICATION NUMBER: US/09/960,352
SEQ ID NOS: 15112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 13050, Application US/09960352
Sequence 13050, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICAMT: Warren, Wesley C.
APPLICAMT: Tao, Nengbing
APPLICAMT: Byatt, John C.
APPLICAMT: Mathialagan, Nagapan
APPLICAMT: Mathialagan, Nagapan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511,006/37-21(10299)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 13112
SEQ ID NO 13050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACCCATGGCTTTGATGGACTGGACCTAGCATGGCTCTACCCCGGGTGGAGAGACAAGCG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cregeagregaareacereacererareacacreaacacreaacacacreaagaacae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAATAAGAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCCTGTGCACCCATGTCATCTACAGCTTTGCCAACATAAGCAACAATGAGATCGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 415;
                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Bos taurus
OTHER INFORMATION: Clone ID: 12-LIB188-006-Q1-E1-C7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 139.4; DB 10;
Pred. No. 1.2e-35;
0; Mismatches 141;
us/09960352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 414
```

σ

```
MOLECULES ASSOCIATED WITH LACTATION ANI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                     384 TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTG 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 GGAGTCGCAGGACTTTCATCAAGTCGGTGCCACCATTTCTGCGGACCCATGGCTTTGATG 300
   191 CTATCTGTTGGAGGATGGAACTTCGGTTCTCAAAGATTTTCCAAGATAGCTTCCAAGACT 250
                                     443 GAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGAC 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGGGAGGTGATGGGAGCTGCCAGACGCCATCGACCCTTCCTGTGCACCCATG
                                                                                                         GGGCTGGACTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204 ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACATCGACCCCCTGCTGTACCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          264 TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444 AGAACCGCCAGACTITCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                563 CTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCA 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      504 GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTC 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 135.2; DB 10; Length
Pred. No. 2.9e-34;
0; Mismatches 133; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Bos taurus
; OTHER INCRMATION: CLONE ID: 32-LIB188-023-Q1-E1-H11
US-09-960-352-7364
                                                                                                                                                                                                                                                                                             Sequence 7364, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND CHER MOLECUI
TITLE OF INVENTION: NUCLEIC ACID AND FAT DEPOSITION
FILLE REFERENCE: 16511.006/37-21(10209)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILLING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQCID NO 7364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; Sequence 3057, Application US/09960352
; Patent No. US20020137139A1
; GENERAL INFORMATION:
; APPLICANT: Warren, Wesley C.
; APPLICANT: Tao, Nengbing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 Similarity
215; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-960-352-3057
                                                                                                                                                                                                                                                                                      US-09-960-352-7364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                      셤
                                                                                                                                   셤
                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                   ò
                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Wengbing
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagapan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUCCLE ALD AND PAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 3072
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                             121 TGACGCTCTATGACACATGAACACACAGAACCCCAACCTGAAGACCCTCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204 ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACATCGACCTCGTGCCTCTGTACCCACC 263
                                                                                                                                                                                                                                               61 TCATCTACAGCTTTGCCAACATAAGCAACAATGAGATCGACACCTGGGAGTGGAATGACG 120
                                                                                                                                                                                                                                                                                  384 TGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTG 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263 CTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGAT 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           383 CTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCT 442
                                                                                                                                                                                                             TGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG 323
                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 TACCGGAGGATGATGGGAGCTGCGTCCCAGACGCCCTTCCTGTGCACCCAT 70
                                                                                                                                                         444 AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           203 TACCGGCCAGGCCTGGGGGCGCTTCATGCCTGACATCGACCCCTGTGCCTCTGTACCCAC
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                         ö
                                                                        DB 10; Length 414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACTGGACCTAGCCATGCCTCTACCCCGGGTGGAGACAAGCGGCATC 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   504 GGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTC 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 418;
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 14-LIB188-015-Q1-E1-D5
US-09-960-352-3072
                  ; OTHER INFORMATION: Clone ID: 56-LIB188-019-Q1-E1-F8 US-09-960-352-13050
                                                                      Score 136.8; DB 10;
Pred. No. 8.6e-35;
0; Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 136; DB 10;
Pred. No. 1.6e-34;
0; Mismatches 150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 3072, Application US/09960352; Patent No. US20020137139A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8.48;
                                                                      Query Match
Best Local Similarity 62.1%;
Matches 216; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 60.3
Matches 251; Conservative
ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
US-09-960-352-3072
                                                                                                                                                                                                                                                                                  324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 3
                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                           à
                                                                                                                                                                        g
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                ç
                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
336 AGACAAGCGGCATC 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Search completed: July
Job time: 287.278 secs
                                                                                                                                                                                             298
                                                                                                                                                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                       q
                                                                                                                                                                                                                                                                                                                                                     qq
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                              õ
                                                                                                                                                          g
                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
us-10-004-

"APPLICANT: Byatt, John C.

APPLICANT: Mathialagan, Nagappan

TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND

TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION

TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION

TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION

CURRENT APPLICATION NUMBER: US/09/960,352

CURRENT FILING DATE: 2001-09-24

NUMBER OF SEQ ID NOS: 15112

LENGTH: 424

TYPE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nongbing
APPLICANT: Tao, Nongbing
APPLICANT: Tao, Nongbing
APPLICANT: Mathialagan, Nagappan
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: WILLEY CAID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
SEQ ID NOS: 15112
SEQ ID NO 14919
                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204 ACCGGCCAGGCCTGGGGCGCTTCATGCCTGACATCGACCCCTGCCTCTGTACCCACC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       384 IGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTG 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  444 AGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACG 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 GGAGTCGCAGGACTTTCATCAAGTCGGTGCCACCATTTCTGCGGACCCATGGCTTTGATG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ACCEGGAGGGTGATGGGAGCTGCTTCCCAGACGCCATCGACCCTTCCTGTGCACCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 TGATCTACGCCTTTGCTGGGGGCAGAACAACGAGATCACCACCATCGAATGGAACGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                            Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       504 GGCIGGACTITGACTGGGAGIACCCIGGCTCICGIGGGAGCCCICCIC 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: unsure
LOCATION: (4)
CTHER INFORMATION: unsure at all n locations
CTHER INFORMATION: Clone ID: 64-LIB188-023-01-E1-H12
US-09-960-352-14919
                                                                                                                                                                                                                                                                                                           ID: 14-LIB188-002-Q1-E1-D5
                                                                                                                                                                                                                                                                                                                                                     Score 135.2; DB 10;
Pred. No. 3e-34;
0; Mismatches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 122; DB 10;
Pred. No. 7.2e-30;
0; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 14919, Application US/09960352 Patent No. US20020137139A1
                                                                                                                                                                                                                                                                                                                                                       Ouery Match
Best Local Similarity 61.8%;
Matches 215; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.5%;
llarity 61.8%;
Conservative
                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: BOS taurus
OTHER INFORMATION: Clone
US-09-960-352-3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 411
TYPE: DNA
ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-960-352-14919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Simi
Matches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
155
                                                                                                                                                                                                                                                                                                         477
238 CATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGA 297
                                                                                                    GATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTCAATGGCCTGAAAAA 357
                                                                                                                                                                                                  358 TAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCC 417
                                                                                                                                                                                                                                                       156 CAGGAACCCCAACCTGAAGACCCTCCTATCTGTTGGAGGATGGAACTTCGGTTCTCAAAG 215
                                                                                                                                                                                                                                                                                                                                   418 TITCACTGCCATGGITTCTACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAA
                                                                                                                                                                                                                                                                                                                                                                                                          ATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538 TGGGAGCCCTCCTC 551
```

3, 2003, 10:57:23

```
HTC 19-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  genes
                                                                                                                                                                                                                                                602793705
602789190
602788819
                                                                                                                                                                            602793390
602783726
602788264
602786759
602785844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus adult male stomach cDNA, RIKEN full-length enriched ako08633.

RIOURGA31.

GI:12842941

HTC; CAP trapper.

Mus musculus (strain:C57BL/6J) adult male stomach cDNA to mRNA, clone:11b:RIKEN full-length enriched mouse cDNA library
                                       603042049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
10499374
11042159
         B0231098
B0231094
B0231064
B0231064
B03231064
B0366745
B0366745
B0366745
B0366745
B0366745
B0366745
B0366737
B0372466
B0372466
B037244
B037244
B03669465
                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
9927923
10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MRNA
                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1533 bp
                                      BI518221
BG868741
BG866775
BG866417
BG869655
BM924663
                                                                                                         BG871337
BG871468
BG872850
BG869958
BG865756
                                                                                                                                                                                                                  BG868463
BG870367
                                                                                                                                                                                                 3G865848
                                                                                                                                                                                                                                      BG872144
BG872647
                                                                                                                                                          3G87280
 AK008633
708.8
681.8
653.6
649.8
641.2
630
                                                                              653.2
6622.4
619.4
619.4
6117.8
6117.8
6117.6
6017.6
603.7
603.2
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
603.6
                                                                                                                                                                                                                                                                                      598.2
596.8
596.8
596.8
595.8
595.6
595.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
AK008633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AK008633 Mus muscu
AK008757 Mus muscu
AK008550 Mus muscu
AK007573 Mus muscu
BI760250 603045190
BM923480 AGENCOURT
                                                                              (without alignments)
10799.277 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
                                                                                                         US-10-004-219B-2
1625
1 gctttccagtctggtggtga......ctgcaataaaatcagcagtc 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                   3, 2003, 04:32:16 ; Search time 2436.98 Seconds
                                                                                                                                                                                                32308132
         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                            16154066 seqs, 8097743376 residues
                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                    summaries
                                                nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AK008757
AK008650
AK007573
BI760250
BM923480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK008633
                                                                                                                                               IDENTITY_NUC.
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_mus:*
em_gss_other:*
em_gss_pro:*
                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_gss:*
em_gss_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                      gb_est2:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est6:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                                                                                                           em_estro:*
em_htc:*
gb_est1:*
                                                                                                                                                                                                                                                                                                                              em_estmu:*
em_estov:*
                                                                                                                                                                                                                                                                                                                   em_estin:*
                                                                                                                                                                                                                                                                                                                                                 em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1533
1534
1534
1530
957
                                                                                                                                                                                                                                                                                      EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.4
64.1
62.7
61.4
44.5
                                                                   July
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1042.2
1018.4
997.4
772
714.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                          Title:
Perfect score:
                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        score gand is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                OM nucleic
                                                                                                                               Sednence:
                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                      Database
                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Result
No.
```

```
/tissue_type="stomach"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMREAFEQEAIESNRPRLAVTAAVAGGISNIQAGYEIPELSKYLDFIHVMTYDLHGSW
EGYTGENSPLYKYPTETGSNAYLNVDYVMNYWKNNGAPAEKLIVGFPEYGHTFILRNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GYDNIKSFSVKAQWLKQNNFGGAMIWAIDLDDFTGSFCDQGKFPLTSTLNKALGISTE
GCTAPDVPSEPVTTPPGSGSGGGSSGGSSGCRCADKADGLYPVADDRNAFWQCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DINPCLCTHLIYAFAGMQNNEITTIEWNDVTLYKAFNDLKNRNSKLKTLLAIGGWNFG
TAPFTTMVSTSQNRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDKHLFTVLVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SDNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEVWDASQEVPYAYKANEWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MAKLLLVTGLALLLNAQLGSAYNLICYFTNWAQYRPGLGSFKPD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTC 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71 GGGTCTGCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTG 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191 GCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  578 GIGCAGGAAAIGCGIGAAGCIITIIGAGCAGGAGGCCAAGCAGAICAACAAGCCCAGGCTG 637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131 GGGAGCTTCAAGCCTGATGACATTAACCCCTGCCTGTATACTCACCTGATCTATGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                      data source:MGD, source key:MGI:1932052, evidence:ISS
putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158 GGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGAACTTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518 TGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCGCTTCATGCCTGACATCGACCCCTGCCTCTGTACCCCACCTGATCTACGCCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1533;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1047; DB 11;
Pred. No. 1.2e-280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 230;
                                                                                                                 /db_xref="FANTOM_DB:2200003E03"
/db_xref="MGD:MGI:1892888"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="MGD:MGI:1932052"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /protein_id="BAB25795.1"
/db_xref="G1:12842942"
                                                                                                                                                                                                                                                                                                                                                                                        /note="chitinase, acidic
                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITYQQHCQAGLVFDTSCNCCNWP"
                                                                                                                                                                              /db_xref="taxon:10090"
   Location/Qualifiers
                                                                                                                                                                                                            /clone="2200003E03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373 g
                                                                                        /strain="C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="putative"
1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64.48;
ilarity 83.48;
Conservative
                                                                                                                                                                                                                                           /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    381 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Sim:
Matches 1204;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                        Kawal, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishli, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Alzawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Salto, T., Osobori, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W., Gasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaldo, I., Pesole, G., Quackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Tomita, M., Wagner, L., Washlo, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Baish, G., Blake, J., Boffelli, D., Bolunga, N., Carninci, P., de Bonaldo, M. F., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Toyo-oka, K., Wang K.H., Weltz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S. Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, H., Bono, H., Brownstein, M., Bult, C., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Etwida, S., Furuno, M., Haraoka, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imotani, K., Ishli, Y., Ttoh, M., Izawa, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Schimi, L., Shibata, R., Shibata, Y., Shinagawa, A., Takahashi, T., Tagami, M., Tagawa, A., Takahashi, T., Toya, T., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Konno, H., Akiyama, J., Mishi, K., Kitsunai, T., Tashiro, H., Itch, M., Sumi, N., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Samannoto, R., Matsuncto, H., Sakaguofi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohra, E., Watahiki, M. Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Kirsi, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., Riki Nitegated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-resegsc.riken.go.jp, URL:http://genome-jgsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Functional annotation of a full-length mouse cDNA collection Nature 409 (6821) 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    further details.
                                                                                                                                                                                                                                                                                                                              11076861
                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                           PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

20

277 190 337 310

457

397

490

577

z	ISM Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.	RS Carninci,P. and Hayashizaki,Y. High-efficiency full-length cDNA cloning AL Meth. Enzymol. 303, 19-44 (1999) NE 99279253		Normalization and subtraction of cap-trapper-selected CDNAs to prepare full-length cDNA libraries for rapid discovery of new genes AL Genome Res. 10 (10), 1617-1630 (2000)		Sumi, N., IShii, Y., Nakamura, S., Hazama, M., Nishine, Y., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watshiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J.,	Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system384-format sequencing pipeline with 384 multicapillary sequencer AL Genome Res. 10 (11), 1757-1771 (2000)	NE 20530913 2D 11076861 2E 4 RS Kawai,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,	Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S., Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I., Saito,T., Okazaki,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R., Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T.,	<pre>Fleischmann,W., Gaasterland,T., Gissi,C., King,B., Kochiwa,H., Kuchl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesole,C., Quackenbush,J., Schriml,L.M., Staubli,F., Suzuki,R., Tomita,M., Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,</pre>	<pre>Baldarelli, R., Barsh, G., Blake, J., Boffelli, D., Bojunga, N., Carninci, P., de Bonaldo, M.F., Brownsteln, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D. A., 'Kamiya, M., Lee, N. H., Lyons, P.,</pre>	<pre>Marchionni,L., Mashima,J., Mazzarelli,J., Mombaertes,P., Nordone,P., Ring,B., Ringwald,M., Rodriguez,I., Sakamuco,N., Sasaki,H., Sato,K., Schonbach,C., Seya,T., Shibata,Y., Storch,K.F., Suzuki,H., Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,</pre>	Wynshaw-Borlas, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y. Functional annotation of a full-length mouse cDNA collection AL Nature 409 (6821), 685-690 (2001)		<pre>Arakawa,T., Baldarelli,R., Bono,H., Brownstein,M., Bult,C., Carninci,P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanagaki,T., Hara,A., Hayatsu,N., Hill,D., Hiramoto,K., Hiraoka,T., Hori,F.,</pre>	<pre>Hume, D., Imotani, K., Ishli, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K.,</pre>	Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Salito, H., Salto, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Schrimi, L., Shibata, K., Shibata, Y., Shibata, A., Shibata, Y., Shibata, A., Shibata, S., Shibata, P., Shibata
ACCESSION VERSION KEYWORDS SOURCE	ORGANISM	AUTHORS TITLE JOURNAL MEDLINE	PUBMED REFERENCE AUTHORS	JOURNAL	PUBMED REFERENCE AUTHORS		TITLE	MEDLINE PUBMED REFERENCE AUTHORS	-	-			TITLE	MEDLINE PUBMED REFERENCE AUTHORS			
	698 CAACTGTCACAGGACTACATCCATGTCATGACCTACGACGTCCATGGCTCCTGG 757 	GAGGCTACACTGGAGAGAACAGCCCCTCTACAAATACCCGACTGACACCGGCAGCAAC	818 GCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAG 877 	878 AAGCTCATCGTTGGATTCCCTACCTATGGACACTTCATCCTGAGCAACCCCTCCAAC 937	938 ACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTGGGCCCTATGCCAAGGAGTCT 997 	· 998 GGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGG 1057 	1058 GATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAAC 1117	1118 ATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGCACAAATTTGGAGGCGCCATG 1177 	1178 GTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACGAGGCAAGTTTCCC 1237 	1238 CTAATCTCCACCCTGAAGAAGGCCCTGCAGAGTGCAAGTTGCACGCTCCAGCT 1297	1298 CAGCCCATGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGAACGGGAGCGGGAGGGGGTAGC 1357	1358 AGCTCTGGAGGCAGCGGGGGCAGTGGATTCTGTGCTGTCAGAGCCAACGGCCTCTAC 1417 	1418 CCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAG 1477 	1478 AACTGCCAGGCCGGGCTTGTCGACACCAGCTGTGTTGCTGCAACTGGGCATAAACC 1537	TGA 154	1442 TAA 1444	AKO08757 AKO08757 1535 bp mRNA linear HTC 19-JAN-2002 LOCUS MUSCULUS ADULT male stomach CDNA, RIKEN full-length enriched library clone 2210020033. Additional adults and additional adults and additional adults.
oy da	දු දු	Oy Db	\$ g	\$ B	Q Q	yo da	Oy Dp	Oy Op	ço q	è q	Qy Dp	Oy Dp	Qy Db	Qy Gp	ŏ i		REST AKO(LOCT DEFJ

AK008757 1535 bp mRNA linear HTC 19-JAN-2002 Mus musculus adult male stomach CDNA, RIKEN full-length enriched library, clone:2210020N23:chitinase, acidic, full insert sequence.

337

310

397

370

457

430

517

490

637

577

550

610

697

670

757

730

790 937

877

817

850

910

997

970

```
998 GGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGG 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1058 GATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAAC 1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGACTICIACTITGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGAC 1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 TGGAACTTTGGAACTGCTCCTTTCACTATGGTTTCCACTTCTCAGAACCGCCAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           731 GCCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCC
                              GCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAA
                                                                                                                                     GCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGC
                                                                                                                                                                TGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACT
                                                                                                                                                                                                                                                                                                                                                  TTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGAC
                                                                                                                                                                                                                                                                                                                                                                             431 TGGGAATACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGTCACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            698 CAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      818 GCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCCTCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGTGGGCCCTATGCCAAGGAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGCTCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGGAGCGGGAGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398
                                                                                                                                                                                                                                                                                                                                                                                                                                                        518
                                                                                                                                                                                                                                                                                                                                                  458
                           278
                                                                                                                                  338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        971
                                                                        g
                                                                                                                               ò
                                                                                                                                                                         g
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                 QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οqα
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               쉽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                              Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. First strand cDNA was primed with a primer [5, GAGAGAGAGATCCAAGAGCTTTTTTTTTTTTTTVN 3'], cDNA was prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization to Rot = 5.0 and subtraction to Rot = 20.0. Second strand cDNA was prepared with the primer adapter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /COUGULS_CAT_L_1
//COUGULS_CAT_L_1
//COUGULS_CAT_L_1
//CD XIE_F_MGI:12843149"
//CD XIE_F_MGI:12843149"
//CD XIE_F_MGI:12843149"
//LIAIS 1A_L LON-WGIST_TENNOTILY KAFNDLKNRNSKLKTLLAIGGWNFGTA
PFTTWNST_SONROTFITSVIKFLROYGFDGLDLDWEYPGSRGSPPODKHLFTVLVKEN
PFTTRWNST_SONROTFITSVIKFLROYGFDGLDLDWEYPGSRGSPPODKHLFTVLVKEN
RTGERDEGALFENRANGTSTSVIKFLROYGFDGLSKLIVGFPEYGHAFTILNPSD
NGIGAPT_SGDGPAGPYTROAGFWAYYEICTFLRSGATEVWDASQ"
                   Hayashizaki,Y.

Direct Submission
Submission
By Alexa (10-JuL-2000) Yoshihide Hayashizaki, The Institute of Submission
Exploration Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemonic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, Tel:81-45-503-9222, Fax:81-45-503-9216)
Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98 GCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTC 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCCACCTGATCTACGCCTTT 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       197. 985
/note="chitinase, acidic
data source:MGD, source key:MGI:1932052, evidence:ISS
putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1042.2; DB 11; Length 1535; Pred. No. 2.7e-279; 0; Mismatches 233; Indels 9; 0
     and
     Muramatsu, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="stomach"
/clone_lib="RIKEN full-length enriched
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="controlled" | /strain="controlled" |
Yoshida, K., Yoshino, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  373 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1520. .1525
/note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64.18;
83.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best_Local Similarity 83.7
Matches 1201; Conservative
                                                                                                                                                                                                                                                                                       further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sednence [2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
```

1177 1090 1237 1150 1297

S

ò g ð 셤 ð g ö 8

```
5 (bases 1 to 1534)
S Adachl.J., Alzawa.K., Akahira,S., Akimura,T., Aono,H., Aral,A.,
Rakawa.T., Baldarelli,R., Bono,H., Brownstein,M., Bult.C.,
Carninci,P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanagaki,T.,
Hara,A., Hayatsu,N., Hill,D., Hiramoto,R., Hiraoka,T., Horl.F.,
Hume,D., Imotani,K., Ishii,Y., Itch,M., Izawa,M., Koya,S.,
Kurihara,C., Matsuyama,T., Miyazaki,A., Nishi,K., Nomura,K.,
Numazaki,R., Ohno,M., Okazaki,Y., Okido,T., Owa,C., Quackenbush,J.,
Saito,H., Saito,R., Sakai,C., Sakai,K., Sano,H., Sano,H., Salto,H.,
Sogabe,Y., Suzuki,H., Tagami,M., Tagawa,A., Takahashi,F.,
Tanaka,T., Tejima,Y., Toya,T., Yamamaka,I.,
Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suzuki, H., Toyo-oka, K., Wang, K. H., Weltz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y. Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="stomach"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanaqawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Pax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101 ACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTGCCTTATACTGAATTTGCAGCTCGGC 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 ACGATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGG 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .1534
/note="chitinase, acidic
data source:MGD, source key:MGI:1932052, evidence:ISS"
db_xref="MGD:MGI:1932052"
/ db_xref="MGD:MGI:1932052"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11; Length 1534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1018.4; DB 11; Lengt
Pred. No. 1.2e-272;
0; Mismatches 231; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="FANTOM_DB:220008L17"
/db_xref="MGD:MGI:1894268"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="2200008L17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62.7%;
ilarity 83.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 1198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE JOURNAL
                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                          MEDLINE
                                                                                                                                                                                                                                                                           PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kawal,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y., Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S., Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I., Saito,T., Gojobori,T., Bono,H., Kasukawa,T., Saito,R., Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T., Fleischman,M., Gasicerland,T., Gissi,C., King,B., Kochiwa,H., Kuchl,P., Lewis,S., Matsuo,Y., Nikaldo,I., Pesole,G., Guackenbush,J., Schriml,L.M., Staubli,F., Suzuki,R., Tomita,M., Wagner,L., Washlo,T., Sakai,K., Okido,T., Furuno,M., Aono,H., Baldarelli,R., Barsh,G., Blake,J., Boffelli,D., Bojunga,N., Fletcher,C., Fullita,M., Garibold,M., Gustincich,S., Hill,D., Fletcher,C., Fullita,M., Garibold,M., Gustincich,S., Hill,D., Hofmann,M., Hume,D.A., Kamiya,M., Leo,M.H., Lyons,P., Nordone,P., Marchionni,L., Mashima,J., Mazzarelli,J., Mombaerts,P., Nordone,P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AKOO8650 1534 bp mRNA linear HTC 19-JAN-2002 Mus musculus adult male stomach cDNA, RIKEN full-length enriched library, clone:2200008L17:chitinase, acidic, full insert sequence. AKO08650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Konno, H., Akiyama, J., Nashi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamanoto, R., Matsunato, H., Sakaguchi, S., Ikegami, T., Rashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                          1418 CCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAG 1477
                                                                                                                                                                                        1262 AGCTCCGGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTAC 1321
                                                                                                                                                                                                                                                                     1478 AACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACC 1537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (strain:C57BL/6J) adult male stomach cDNA to mRNA, clone_lib:RIKEN full-length enriched mouse cDNA library clone:2200008L17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carninci, P. and Hayashizaki, Y.
High-effictency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AK008650.1 GI:12842971
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                     1538 TGA 1540
                                                                                                                                                                                                                                                                                                                                                                                                                                           1442 TAA 1444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1076861
                                            1358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
AK008650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
```

ñ

	AK007573 Mus musculus 10 day old male pancreas cDNA, IRREN enriched library, clone:1810021D23:chitinase, acid sequence. N AK007573.1 GI:12841201 HTC; CAP trapper. Mus musculus (strain:C57BL/6J) 10 day old male pan mRNA, clone.1810021D23. SM Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata Eukaryota; Butheria; Rodentia; Sciurognath; Murida E 1 Carninci, P. and Hayashizaki, Y. Garninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999)		RIKEN integrated sequence analysis (RISA) system-sequencing pipeline with 384 multicapillary sequence sequencing pipeline with 384 multicapillary sequences of solutions and sequences of solutions of solutions and sequences of solutions of solutio
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESULT 4 AK007573 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE SOURCE AUTHORS TITLE TOURNAL PURMEDLINE PURMEDLINE PURMEDLINE PURMEDLINE PURMEDLINE	REFERENCE AUTHORS TITLE JOURNAL MEDLINE PUBMED REFERENCE AUTHORS	TITLE JOURNAL MEDLINE PUBMED REFERENCE AUTHORS
220 133 280 193 340 253 400 313 313	520 580 493 640 640 613 760 673	732 732 792 940 1000 911	971 1120 1031 1180 1091 1240 1151
TCTGCCTACCAGCTGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGG	ATCACCTCAGTCATCATCTGCGCCCAGTATGAGGGTTTGACGGGCTGGACTTTGACTGG		
TTTCACCAACTGG	305CCAGTATGAG 		TITITITITITITITITITITITITITITITITITITI
	ATCACCTCAGTCATCAAATTCCTGCGCCCAGTATGA		
161 TCTGCCTACCA			
64 69 69 69 69 69 69 69 69 69 69 69 69 69	Oy 52 COY 58 COY COY COY 58 COY	-	
,			

(', Shibata,K., 1 Hayashizaki,Y. elected cDNAs to kscovery of new genes saki,N., Carninci,P.,
ashiro,H., Itoh,M.,
hihe,T., Harada,A.,
ni,T., Kashiwagi,K.,
ara,E., Watchiki,M.,
atsuura,S., Kawai,J.,
atsuara,S., Kawai,J.,
atsura,S., Rawai,J.,
atsura,S Itoh,M., Ishii,Y.,
lachi,J., Fukuda,S.,
ddo,S., Yamanaka,I.,
sukawa,T., Saito,R.,
Casavant,T.,
B., Kochiwa,H.,
lle,G.,
ti,R., Tomita,M.,
Bojunga,N., GGGCATAAACCTGA 1540 || || || || || || || | GGCCATGAACCTAA 1442 r HTC 19-JAN-2002 N full-length :Idic, full insert CAGCTCCTGACGTG 1211 ta; Euteleostomi; dae; Murinae; Mus. ancreas cDNA to

217 130 277

20

249

397

457

517

337

577 489 637 549 609

697

699

817

757

789 937 849

```
GGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGG 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGCCCCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAAC 1117
                                                                                                                                                                                                                                                                                                                                                        309
                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               997
                       GCAACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTC 157
                                                                                                                                                                                                                                                                610 GAACTITCIAAGTACCTGGAITICAICCATGTCATGACATATGACCTCCATGCCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGTCACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCTCATTGTTGGATTCCCAGAGTATGCACACCCTTCATCCTGAGAAACCCCTCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGGCCCCTATGCCAAGGAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAACGATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTG
                                                                                                GGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTG
                                                                                                                                                                       GGGCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTT
                                                                                                                                                                                                                                                GCTGGGAGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAA
                                                                                                                                                                                                                                                                                                                         GCTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                               TGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Argettactectectetagetegegatttccaacatccagectegetateagatccct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGGCTACACTGGAGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCTCATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         996
                       98
                                                           77
                                                                                                158
                                                                                                                                 71
                                                                                                                                                                       218
                                                                                                                                                                                                            131
                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                 191
                                                                                                                                                                                                                                                                                                                      338
                                                                                                                                                                                                                                                                                                                                                          250
                                                                                                                                                                                                                                                                                                                                                                                               398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 790
                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      අ
                         ò
                                                       g
                                                                                                å
                                                                                                                             g
                                                                                                                                                                     ò
                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                        Adachlu. Arawa.K., Akahira,S., Akimura,T., Aono,H., Arai,A.,
Sakawa.T., Baldarelli,R., Bono,H., Brownstein,M., Bult,C.,
Carninci,P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanagaki,T.,
Hara,A., Hayatsu,N., Hill,D., Hiramoto,K., Hiraoka,T., Hori,F.,
Hume,D., Imotani,K., Ishii,Y., Itoh,M., Izawa,M., Kosukawa,T.,
Kato,H., Kawai,J., Kojima,Y., Kouda,M., Koya,S.,
Kurihara,C., Matsuyama,T., Miyazaki,A., Nishi,K., Nomura,K.,
Numazaki,R., Ohno,M., Okazaki,Y., Okido,T., Owa,C., Quackenbush,J.,
Salto,H., Salto,R., Sakai,C., Sano,H., Sasaki,D.,
Schriml,L., Shibata,K., Shibata,Y., Shinagawa,A., Shiraki,T.,
Tanaka,T., Tejima,Y., Toya,T., Yamamura,T., Yamanaka,I.,
Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bult, C.,
Flitta, M., Gariboldi, M., Gustincich, S., Hill, D.,
Hofmann, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, P.,
Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P.,
Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H.,
Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F.,
Toyo-oka, K., Wang, K.H., Weitz, C., Wilming, L.,
Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="pancreas"
/clone_lib="RikEN full-length enriched mouse cDNA library"
/dev_stage="10 day old"
1. .1530
/note="chitinase, acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Gemomic Sciences Center (GSC),
RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       data source:MGD, source key:MGI:1932052, evidence:ISS"
/db_xref="MGD:MGI:1932052"
1 384 c 370 g 399 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cleaved with XhoI and SstI. Cloning sites, 5' end: XhoI;
                                                                                                                                                             Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.rlken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 997.4; DB 11; Length 1530;
Pred. No. 8.7e-267;
0; Mismatches 236; Indels 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="C57BL/G7"
/db_xref="FANTOW_DB:1810021D23"
/db_xref="MGD:MGI:1892862"
/db_xref="taxon:10090"
/clone="1810021D23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 end: SstI. Host: SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61.4%;
82.7%;
                                                                                                                                                                                                                                          (bases 1 to 1530)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 82.7
Matches 1193; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                   TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                       PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

7;

g

à a ò g

ŏ g ò

ð

ద

g

ð

ð

```
1171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAA-AAATGGAGCCACTCAGGGATGG 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1058 GATGCCCCTC-AGGAAGTGCCTTATGCCTA-TCAGGGCAATGTGTGGGGTTGGCTAT--GA 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCATGGTCTGGGCCATTGATCT-GGATGACTTCACTGGCACTTTCTGCAACCAGGGCAA 1230
                                                                                                                                                                                            398
                                                                                                                                                                                                                                                                                                                                                                                      518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          938
                                                                                                                                                                                                                                                                                           458
                                                                                                                                                                                                                                                                                                                                      144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           864
                                                                                                                                                                                                                                                                                                                                                                                                                                     204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCATGGTCCTGGCCATTGATCTCGGATAACTTCCACTGGGCACTTCTGCAACCAGGCAA 924
                                                                                                                                                                                                                                            84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGAGTACCCTGGCTCTCGTGGGAGCCCTCTCAGGACAAGCATCTCTTCACTGTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 699 AACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTCATCGTTGGATTCCCTACCTATGGACACATCATCCTGAGCAACCCCTCCAACA
                                                                                                                                                                                                                                                                                                                    85 GGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACGCCCAGACTT
                                                                                                                                                                                                                                                                                                                                                                                           459 TCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                           TCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        565 AGCTCATCGTTGGATTCCCTACCTATGGACACAACTTCATCCTGAGCAACCCCTCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAGGAGTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1114 CAACATCAAGAGC-TTCGATATTAAGGCTCAATGGC-TTAAGCACAACAAATTTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTCAATGGCCTGAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCT
                                                                                                                                                                                                                                            CITATACTGAATTTGCAGCTCGGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCT
                                                                                                                                                                                                                                                                                           GGAACTICGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTT
                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 8;
                                                                                                 Length 957
                                                                                                                                               Indels
Note: this is a NIH_MGC Library."
177 c 227 g 231 t
                                                                                                                                                 45;
                                                                                          Score 772; DB 13;
Pred. No. 5.3e-204;
0; Mismatches 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GITICCCCTAAICICCACCCTGAAGAAGGC 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTTTTCCCTAATTTCCACCTGTAAAACGGC 954
                                                                                            47.5%;
ilarity 94.3%;
Conservative
                         277
     023.
                                                                                            Query Match
Best Local Similarity
Matches 877; Conserv
                           ಹ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1231
                                                                                                                                                                                            339
                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                           399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           865
                         BASE COUNT
ORIGIN
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ·δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                        CCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGGAG 1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTCTGGAGGCAGCTCGGAGGCAGTGGATTCTGTGCTGTCAGAGGCCAACGGCCTCTAC 1417
                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGTGGCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAG 1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI760250 | 957 bp mRNA linear EST 25-SEP-2001
603045190F1 NIH_MGC_116 Homo sapiens CDNA clone IMAGE:5185486 5',
  GTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCC 1237
                                                                                               CTAATCTCCÁCCCTGÁAGAAGGCCCTCGGCCTGCAGGTGCAAGTTGCACGGCTCCAGCT 1297
                                                                                                                                                                                            1298 CAGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGC 1357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CMU-NOST CONTROL NOTING STEED. SCORN (destroyed): RNA SCORNCE SITE_1: NOTING STEED. ECORN (destroyed): RNA SCORNCE AND NOTING STEED. SCORNCE AND NOTING STEED. SCORNCE AND NOTING STEED. SCORNCE AND NOTING STEED. SCORNCE STOWN STEED STE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 95)
                                                  ATCTGGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGCATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NIH-MGC http://mgc.nc1.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Uppublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cgapDs-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Caraged by: The I.M.A.G.E. Consortium (LLNL.)
DNA Sequencing by: Incyte Genomics, Inc.
CONDETION OF THE I.M.A.G.E. Consortium/LLNL at:
http://image.llnl gov
the I.M.A.G.E. Consortium/LLNL at:
Plate: LLAMI1463 row. c column: 23
High quality sequence stop: 780.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:5185486"
/clone_lib="NIH_MGC_116"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
B1760250
B1760250.1 G1:15751828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1, .957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1538 TGA 1540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAA . 1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human.
                                                                                                                                            1146
                                                                                                                                                                                                                                                                                           1358
                                                                                                                                                                                                                                                                                                                                                                                                                                     1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1478
                                                                                               1238
                                                                                                                                                                                                                                                                                                                                                                                        1418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
BI760250
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
```

1063

1183

1243

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 1038)

1 (Dases 1 to 1038)

1 National Institutes of Health, Mammalian Gene Collection (MGC)

1 (Mpublished (1999)

1 (Mpublished (1999)

1 (Mpublished (1999)

2 (Mpublished (1999)

3 (Mpublished (1999)

4 (Mpublished (1999)

5 (Mpublished (1999)

6 (Mpublished (1999)

7 (Mpublished (1999)

7 (Mpublished (1999)

7 (Mpublished (1999)

7 (Mpublished (1999)

8 (Mpublished (1999)

9 (Mpubl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BIS17797 1038 bp mRNA linear EST 29-AUG-2001 603042049F1 NIH_MGC_116 Homo saplens cDNA clone IMAGE:5182357 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); source anonymous pool of 3 colons, age 26 yo male, 49 female, 71 yo male colon; 46 yo male kidney, and pool stomachs, 62 yo male and 70 yo female. Library is oligo-dT primed and directionally cloned (EcoRV site
481 ATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGGGCCCTATGCCAAGGAGTCTGGGATC
                                                                                                                                                                                                                                        1064 CCTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGGTTGGCTATGACAACATCAAG
                                                                                                                                                                                                                                                                                                                                                         1124 AGCTTCGATATTAAGGCTCAATGGCTTAAGCACAACAATTTGGAGGCGCCATGGTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCTAATC
                                                                                                                                                                                                         1004 TGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="INAGE:5182357"
/clone_lib="NHL_MGC_116"
/lab_host="DH108"
/note="Organ: pooled colon, kidney, stomach; Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
BI517797
BI517797.1 GI:15342589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human.
                                    421
                                                                                           944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI517797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                           ò
                                                                                                                                                  g
                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ôγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /ntce="Organ: pooled colon, kidney, stomach; Vector:
pCWV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA
source anonymous pool of 3 colons, age 26 yo male, 49 yo
female, 71 yo male colon; 46 yo male kidney, and pool of 2
stomachs, 62 yo male and 70 yo female. Library is
oligo-dT primed and directionally cloned (EcoRV site is
destroyed upon cloning). Average insert size 1.4 kb,
insert size range 1.3 kb. Library is normalized and
enriched for full-length clones and was constructed by C.
Gruber (Invitrogen). Research Genetics tracking code
023. Note: this is a NIH, MGC Library.*
                                                             BM923480 1105 bp mRNA linear EST 12-MAR-2002 AGENCOURT_6623879 NIH_MGC_116 Homo sapiens cDNA clone IMAGE:5759117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
                                                                                                                                                                                                                                                                                     Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Pukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

Lobase; 1 (base; 1 to 1105).

Nith-MCC http://mgc.ncl.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC).

Unpublished (1999).

Email: cgapbs-rémail.nih.gov
Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.lln.gov

Plate: LLAM12804 row: a column: 06

High quality sequence stop: 668.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 ACTGCTGCAGTAGCTGCTGCCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 704 TCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGC 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACAGCGGCAGCAACGCCTAC 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTC 883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       884 ATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGA 943
                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 14; Length 1105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44.0%; Score 714.8; DB 14
97.3%; Pred. No. 5.5e-188;
Live 0; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5759117"
/clone_lib="NIR MGC_116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host-"DH10B"
                                                                                                                                                                                 BM923480.1 GI:19373859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 97.39
....nes 759; Conservative
                                                                                                                       5', mRNA sequence.
BM923480
                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                           human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
      RESULT 6
BM923480
                                                                                                                                                  ACCESSION
```

g ò a à 8 ò g δ 셤 ò

ò

of of 13

Sun

```
l. .892

/organism="Mus musculus"
/organism="Mus musculus"
/organism="Mus musculus"
/db.xref="IMGE:6051580"
/clone="IMGE:6051580"
/clone="IMGE:6051580"
/clone="IMGE:0051580"
/clone="IMGE:0051581"
/lab_host="DH10B (T1-resistant)"
/l
                                                                                                                       Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Musinae; Mus.
                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAM13305 row: k column: 05
High quality sequence stop: 772.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGTCCTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TGGCTCTTCTGCTGAATGCTCACCTGGGGTCTGCCTACAATCTGATATGCTAATTTCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTGTACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAAAACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITCTACTCCTGAGAACCGCCAGACTITCATCACCTCAGTCATCAAAITCCTGCGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGAGTTTGACGGGCTGGACTTTGACTGGGATACCCTGGCTCTCGTGGGAGCCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGGGCCCAGTACCGGCCAGGCCTGGGGCGCTTCATGCCTGACAACATCGACCCCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGACAAGCATCTCTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                     Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42.0%; Score 681.8; DB 14; Length 892; larity 85.6%; Pred. No. 7.7e-179; Conservative 0; Mismatches 128; Indels 0;
                                                                                                                                                            1 (bases 1 to 892)
NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene
Unpublished (1999)
                                                                                                                       Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                         GI:20412498
  IMAGE: 6051580 5', mRNA
                                                                                                    Mus musculus
                                                                              house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
nes 758; Conserv
                      BQ231098
BQ231098.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
COMMENT
                        ACCESSION
                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1426
                                                                                                                                                                                                     4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGATGGGATGCCCCTCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATTGA 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATA----ACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAG--CAGAA 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-MAY-2002
                                                                                                                                                                                                                                          828
                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                    948
                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                         ပ
                                                                                                                                                                                                                                                                                                                    829 IGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAAGCTCATCGT 888
                                                                                                                                                                                                                                                                               9
                  insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by Gruber (Invitrogen). Research Genetics tracking code 023. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGGTCTATATICCTAGAGTTCCAGTCTTTTGCTTAGGACATGTTGCCC 1594
                                                                                                                                                                                                                                                                 TGCCCCCACCTCTGGTGCTGGTCCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACATCAAGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGATATTAAGGCTCAATGGCTTAAGCACAACAAATTTGGAGGCGCCATGGTCTGGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTTTCCCCCTAATCTCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTACCTCAA
                                                                                                                                                                                                                                                                                                                                         61 TGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCAGGAAGCTCATGT
                                                                                                                                                                                                                                                                                                                                                                                              TGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACACTGGAATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCTCGGGAGGCAGTGGATTCT - GTGCTGTCAGAGCCAACGGCCTCTACCCCGTGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCCAGGCCGGGCTTGT-CTTCGACACCAGCTGTGATTGCTGCAACTGGGCCATAAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAATAACTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCTGGAGG
                                                                                                                                                                                                     Gaps
  Average insert size 1.4 kb,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                              Length 1038
                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               892 bp mRNA linear ES7
NCI_CGAP_Stl Mus musculus cDNA clone
                                                                                                                                                          Score 708.8; DB 13;
Pred. No. 2.5e-186;
0; Mismatches 42;
upon cloning).
                                                                                                                                                          43.6%;
ilarity 93.8%;
Conservative
    destroyed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BQ231098
AGENCOURT_7578138
                                                                                                                                                                                Similarity
                                                                                                  ø
                                                                                                273
                                                                                                                                                                                                 784;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1427
                                                                                                                                                                                                                                        69/
                                                                                                                                                                                                                                                                             н
                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1480
                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
BQ231098
LOCUS
DEFINITION
                                                                                              BASE COUNT
ORIGIN
                                                                                                                                                          Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . მ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

ö 191

þe

251 120 311 180 371 240 431 300 491 360 551 420 611 480

```
BG867815
602768336F1 NCI_CGAP_SG2 Mus musculus CDNA clone IMAGE:4912544 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                         639
                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                            279
                                                                                                                                                           339
                                                                                                                                                                                                            399
                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                          459
                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                         519
                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661 NGGCTACACTGGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGC 720
                                                            219
                                                                                                                                   180
                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 house mouse.
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosfomi;
                                                                                                                                                           GCGCTTCATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGC
                                                                                                                                                                                                                                                                      CATCACCTCAGTCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTG
                                                                                                                                                                                                                                                                                                                      GGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGT
                                                                                                                                                                                                                                                                                                                                                                      GCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                       GGTCACTGCTGCAGTAGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCTACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTCATCGTTGGATTCCCTACCTATGGACACA-ACTTCATCCTGAGCAACCCCTCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 AACGAIGGCCAAGCIACTCICGTCACGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGG
                                                              CTCTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGG
              AACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGG
                                                                                                                                                                                                                                                           GAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAATTGGTGCCCCC 955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG867815.1 GI:14218355
                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                          580
                                                                                                                                                                                                                                                                                                                                                                                                                                                         640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       880
               001
                                                                                     61
                                                                                                             220
                                                                                                                                   121
                                                                                                                                                             280
                                                                                                                                                                                    181
                                                                                                                                                                                                                                                            400
                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                          4.60
                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                           520
                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
BG867815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                               g
                                                                               g
                                                                                                                                9
                                                                                                                                                                             셤
                                                                                                                                                                                                     ö
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                   δλ
                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                              ğ
                                                                                                        ò
                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1..872
/organism="Mus musculus"
/db_xerf="texon:10090"
/clone="IMAGE:605490"
/clone="IMAGE:605490"
/clone="Image:stonach: Vector: pCMV-SPORT6; Site_1: SalI;
/note="Organ:stonach: Vector: pCMV-SPORT6; Site_1: SalI;
Site_2: NotI; cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.77 kb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."

18 a 222 c 205 g 225 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Examples.

Examples.

Mus musculus.

Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia: Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (Dases 1 to 872)

NIH-MGC http://mgc.ncl.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Nutional Institutes of Health, Mammalian Gene Collection (MGC)

Contact: Robert Strausberg, Ph.D.

Email: Gapbbs-rémail.ih.gov

Tissue Procurement: Jeffrey E. Green, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies (LINL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LiAmi3305 row: g column: 11

High quality sequence stop: 724.
                                                                                                                                                                                                                                                                                                                                                                                  02-MAY-2002
                                                                                                                                                851
                                                                                                                                                                                                                       780
                         540
                                                 731
                                                                        9
                                                                                                 791
                                                                                                             720
                                                                                                                                                                                               971
                                                                                                                                                                                                                                                       781 CCTTCATCCTGAGAAACCCTCTGATAATGGAATTGGTGCCCTACCTCTGGTGATGGCC 840
                                                792 AATACCCGACTGACACCGGCAGCAACGCCTACCTCAATGTGGATTATGTCATGAACTACT
                                                                                                                                                             ACTICATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTC
                                                                                               732 TGACCTACGACCTCCATGGCTCCTGGGAGGCTACACTGGAGGAGCAGCCCCCTCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                               BQ231064 872 bp mRNA linear EST
AGENCOURT_7578230 NCI_CGAP_Stl Mus musculus cDNA clone
IMAGE:6651490 5', mRNA sequence.
BQ2311064.1 GI:20412464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 653.6; DB 14; Length 872;
Pred. No. 5.7e-171;
); Mismatches 120; Indels 1;
                                                                                                                                                                                                                                                                                            CTGCTGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGA 1017
                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.2%;
ilarity 85.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 736; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                            EST.
                        181
                                                                                                                        601
                                                                                                                                                                       661
                                                                                                                                                                                              852
                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                              912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                        RESULT 9
BQ231064
LOCUS
                 8
                                                                  g
                                                                                          õ
                                                                                                                 g
                                                                                                                                             ò
                                                                                                                                                               음
                                                                                                                                                                                      à
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                   셤
                                               ò
```

603 196 916

723

```
603042049T1 NIH_MGC_116 Homo sapiens cDNA clone IMAGE:5182357 3', mRNA sequence.
BI518221 GI:15343013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /taule_libe_nain_rac_libe
/lab_host="DH100"
/note="Organ: pooled colon, kidney, stomach; Vector:
pcWV-sPORT6: Site_l: Not!; Site_2: EcoRV (destroyed); RNA
source anonymous pool of 3 colons, age 26 yo male, 49 yo
female, 71 yo male colon; 46 yo male kidney, and pool of
stomachs, 62 yo male and 70 yo female. Library is
oligo-dT primed and directionally cloned (EcoRV site is
destroyed upon cloning). Average insert size l.4 kb,
insert size range l.3 kb. Library is normalized and
enriched for full-length clones and was constructed by C.
Gruber (Invitrogen). Research Genetics tracking code
023. Note: this is a NIR_MGC Library."
                                                                                                                                                                                                                                                 724 AACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTTTGGACACACCTTC 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTACCTCAATGTGGATTATGTCATGAACT-ACTGGAAGGACAATGGAGCACCAGCTGAG 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L Unages 1 CO 344)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammailan Gene Collection (MGC)

National Institutes of Health, Mammailan Gene Collection (MGC)

Dupublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs r@mail.nih.gov

Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Right quality sequence start: 24

High quality sequence start: 24

High quality sequence stop: 746.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 824)
                                                                                                                         CAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGACA
                                           TACGACCTCCATGGCTCCTGGGAGGCTACACTGGAGAGAACAGCCCCCTCTACAAATAC
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13; Length 824;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                          ATCCTGAGCAACCCCTCCAACACTGGAATTGGTGCCCCCAC 957
                                                                                                                                                                                                                                                                                                                  Score 641.2; DB 13
Pred. No. 1.6e-167;
); Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5182357"
/clone_lib="NIH_MGC_l16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39.5%;
ilarity 95.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Simi
Matches 733;
                                         737
                                                                                  604
                                                                                                                                                                                                                                                                                          917
                                                                                                                                                                                                            857
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
BI518221/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                       δý
                                                                                g
                                                                                                                                                              g
                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                 q
                                                                                                                           à
                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Site_1:
r: Oligo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    137 CTTATACTGAATTTGCAGCTCGGCTCTGCCTACCAGCTGACATGCTACTTCACCAACTGG 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124 ACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAATGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTCT 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTCCTGAGAACCGCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGAG 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITGACGGGCTGGACTTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGAC 556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCATCTTTTCACTGTCCTGGTGCAGGAAATGCGTGAAGCTTTTGAGCCAGGAGGCCAAG 616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGATCAACAAGCCCAGGCTGATGGTCACTGCTGCAGTAGCTGCTGGCATCTCCAATATC 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGACC 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
  Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                           Contact: Robert Strusberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CONA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llni.gov
Plate: LLAMIOBIG | row: g column: 09
High quality sequence stop: 824.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATTTCACCAACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCCACCTGATCTACGCCTTTGCTGGGAGGCAGAACAACGAGATCACCACCATCGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCAGTACCGGCCAGGCCTGGGCGTTCATGCCTGACAACATCGACCCCTGCCTCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="InMcE:4912544"
/clone=lib="wcl_CGAPE32"
/clone=lib="wcl_CGAPE32"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Sit Note; Site_2: Sali; cloned unidirectionally. Primer: dT. Average insert size 1:3 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library."
                 1 (bases 1 to 838)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 838;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 649.8; DB 12; Length
Pred. No. 6.3e-170;
.0; Mismatches 107; Indels
                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tch 40.0%;
al Similarity 87.0%;
714; Conservative
                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                       1. .838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                   · FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
```

δ 셤 à ద õ g ò q qq

ò

q à g ò g ò a

ò

yo of 2

13

ů.

7;

```
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov. d column: 20
Plate: LLAM10846 row: d column: 20
High quality sequence stop: 836.
Location/Qualifiers
1. 655
/organism="mams musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
/clone="lMAGE:4924003"
/clone="lMAGE:4924003"
/clone="limAGE:4924003"
/clone="limAGE:49240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGCAGAACAACGAGATCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGCTTTC 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGATGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGCTGCAGTAGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACACTGGAGAGAACAGCCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TICATGCCTGACAACATCGACCCCTGCCTCTGTACCCACCTGATCTACGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCGGGACTGCCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCAGTCATCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGCCTGGGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                               855;
                                                                                                                                                                                                                                                                                                                                                             Score 630; DB 12; Length 8
Pred. No. 2.2e-164;
0; Mismatches 110; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                    / Match 18.18;
Local Similarity 86.5%;
nes 718; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               199
                                                                                                                            source
                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
9
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                            1054
                                                                                                                                                                                                                                                              1113
                                                                                                                                                                                                                                                                                                                             1173
                                                                                                                                                                                                                                                                                                                                                                                                 1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCTACCCCGTGGCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCAC-GTA 1470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGCAGAACTGCCAGGCCGGGCTTGTCTTCGACACCAGCTGTGATTGCTGCAACTGGGC 1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp mRNA linear EST 29-MAY-2001
musculus cDNA clone IMAGE:4924003 5',
                                                                                                                                                                                                                                                                                               468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        648
                                                                                                                                                        588
                                                                                                                                                                                                                            528
                                                                                                                                                                                                                                                                                                                                                               408
                                                                                                                                                                                                                                                                                                                                                                                                                                   348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           708
                                                       934
                                                                                                                        994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
   CATGGTCTGGGCCATTGATCTGGATGACTTCACTGGCACTTTCTGCAACCAGGGCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCCTAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGGTGCAAGTTGCACGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCTCATCGTTTGGATTCCCGACCGTATGGACAACTTCATCCTGAGCAACCTCC
                                                                                                                       AACACTGGAATTGGTGCCCCCACCTCTGGTGCTGGTCCTGCTGGGCCCTATGCCAAGGAG
                                                                                                                                                                                          TCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAAAAATGGAGCCACTCAGGGA
                                                                                                                                                                                                                                                              TGGGATGCCC-CTCAGGAAGTGCCTTATGCCTATCAGGGCAATGTGTGTGGGTTGGCTATGA
                                                                                                                                                                                                                                                                                                                             CAACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAAGCACAACAAATTTGGAGGCGC
                                                     AAGCTCATCGTT - - GGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCC - CTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
Email: Ggapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAAACCTGACCTGGTCTATATTCCCTAGAGTTCCAGTCTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Rodentia; Sciurognath
( Dases 1 to 855)
NIH-MGC http://mgc.ncl.nih.gov/
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  855
Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG872136
602792974F1 NCI_CGAP_SG2
mRNA sequence.
BG872136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG872136.1 GI:14222676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST.
                                                                                                                                                                                                                                                                                            527
                                                                                                                                                        647
                                                                                                                                                                                                                                                            1055
                                                                                                                                                                                                                                                                                                                             1114
                                                                                                                                                                                                                                                                                                                                                                                               1174
                                                                                                                                                                                                                                                                                                                                                                                                                               407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1531
                   167
                                                     878
                                                                                     707
                                                                                                                       935
                                                                                                                                                                                          995
                                                                                                                                                                                                                          587
                                                                                                                                                                                                                                                                                                                                                             467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 12
BG872136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                            à
                   셤
                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                     à
                                                                                   셤
                                                                                                                                                                                          à
                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                     ò
```

163

9

223

283

240

403

463

523

583

643 540

Db 241 TCAATGACTTGAAAACAGGAACTGAAAACCTGAAAACCCTCCTGGCAATTGGAGGCTGGA 300	QY 582 AGGAANTGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGCATCAACAGCCCAGGCTGATGG 641	Qy 762 GCTACACTGGAGAACAGCCCCTCTACAAATACCCGACTGACACGCCAGCAACGCCT 821 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	S IS	CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llh.gov j column: 01 High quality sequence stop: 774. FEBATURES 1. 847 "Mus musculus" //db_xref="taxon:10090" //clone="image:4912608" //clone="image:4912608"
Oy 824 CTCAATGTGG-ATTATCTCATGAACTA-CTGGAAGGACAATGGACCAGCTGAAAGC 881	ACCESSION BG868741.1 GI:14219281 VERSION BG868741.1 GI:14219281 VERSION BG868741.1 GI:14219281 SOURCE House mouse. ORGANISM WIS MUSCULUS EST. MARMMalalis, Eutheria, Rodentia; Sciurognathi; Muridae; Mus. REFERENCE 1 (bases 1 to 837) AUTHORS NIH-MGC http://mgc.nci.nih.gov/. TITLE National Institutes of Health, Mammalian Gene Collection (MGC) JOURNAL Contact: Robert Strausberg, Ph.D.	Email: cgapbs-remail.nih.gov Tissue Procurement: Jeffrey E. Green, M.D. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.ilnl.gov Plate: LLAM10819 row: k column: 17 High quality sequence stop: 836. Location/Qualifiers Jorganism="Wus musculus" //db.xref="taxon:10090" //db.xref="taxon:10090" //clone="image:1913800" //lab_host="bH10B (T1 phage-resistant)" //lab_host="bH10B (T1 phage-resistant)" //lab_host="bH10B (T1 phage-resistant)" //lab_host="hundle Libe" Not I: Salte 2: SalI: Coloned unidirectionally. Primer: Olico	GT. Average insert size 1.3 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library." ORIGIN Query Match S8.7%; Score 629; DB 12; Length 837; Best Local Similarity 84.5%; Pred. No. 4.1e-164; Matches 707; Conservative 0; Mismatches 130; Indels 0; Gaps 0; Qy 102 CCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCTTATACTGACTTGCACTCGCT 161	Oy 162 CTGCCTACCAGCTGACATGCTACTTCACCAACTGGGCCCAGTACCGGCCAGGGCCTGGGGC 221

Sun

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                       DEFINITION
                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
RESULT 15
BG866417
                                     ACCESSION
                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
      /note="Organ: salivary gland; Vector: pcMv-spoRr6; Site_1: NotI: Site_2: SalI: Cloned unidirectionally. Primer: Oligo dr. Average insert size 1.3 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library."
                                                                           1;
                                                                                                                                       121
                                                                                           159
                                                                                                                        219
                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                      579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                       279
                                                                                                                                                                     181
                                                                                                                                                                                     339
                                                                                                                                                                                                     241
                                                                                                                                                                                                                          459
                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                               519
                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                            639
                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                          669
                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                       759
                                                                                                                                                                                                                                                                                                                                                                                                              819
                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                        61
                                                                                                                                                                                              GGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                              CTACCTCAATGTGGATTATGTCATGAACTACTGGAAGGACAATGGAGCACCAGCTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCCTCCAACAC
                                                                                                                      GGGCTACACTGGAGAGAACAGCCCCTCTACAAATACCCGACTGACACCGGCAGCAACGC
                                                                                                                                                     GCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGAT
                                                                                         100 AACCATGACAAAGCTTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGG
                                                                                                  TGGGAGGCAGAACAACGAGTCACCACCATCGAATGGAACGATGTGACTCTCTACCAAGC
                                                                                                                                                                                                                   TITCAATGGCCTGAAAAATAAGAACAGCCAGCTGAAAACTCTCCTGGCCATTGGAGGCTG
                                                                                                                                                                                                                                                GAACTICGGGACTGCCCCTTTCACTGCTTTCTACTCCTGAGAACCGCCAGACTTT
                                                                                                                                                                                                                                                                               CATCACCTCAGTCAAATTCCTGCGCCAGTATGAGTTTGACGGGCTGGACTTTGACTG
                                                                                                                                                                                                                                                                                                                    GGTCACTGCTGCTGCTGCTGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                       ACTGTCACAGTACCTGGACTACATCCATGTCATGACCTACGACCTCCATGGCTCCTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                            Length 847
                                                                          Indels
 phage-resistant)"
                                                           Score 626; DB 12;
Pred. No. 2.8e-163;
0; Mismatches 130;
/lab_host-"DH10B
                                                           38.5%;
ilarity 84.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               846
                                                                   Local Similarity
les 715; Conserv
                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAATT
                                     214
                                                                                                                        160
                                                                                                                                      62
                                                                                                                                                                                     280
                                                                                                                                                                                                                   340
                                                                                                                                                                                                                                                400
                                                                                                                                                                                                                                                                302
                                                                                                                                                                                                                                                                              460
                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                          580
                                                                                                                                                                                                                                                                                                                                                                        640
                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                            Match
                                     COUNT
                                                           Query Ma
Best Loc
Matches
                                     BASE CO
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                 QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                     8
                                                                                                                      ò
                                                                                                                                    엄
                                                                                                                                                   õ
                                                                                                                                                                g
                                                                                                                                                                                   ò
                                                                                                                                                                                               q
                                                                                                                                                                                                              ογ
                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                       οy
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                    οχ
                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δy
                                                                                          ò
```

```
tte_1:
Oligo
bp mRNA linear EST 29-MAY-2001 musculus cDNA clone IMAGE:4911421 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .809
/organism="Mus musculus"
/organism="FVBA"
/db_xref="taxon:10090"
/clone="INAGE:4911421"
/clone="InAGE:4911421"
/clone="Inb-"NoI_GGAP_SG2"
/lab_host="bull0 (T1 phage-resistant)"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Site_Note:"Organ: salivary gland; Vector: pCMV-SPORT6; Site_Taxonote; Sali; Cloned unidirectionally. Primer: Oli; dr. Average insert size il 3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
93 a 200 c 208 g 207 t lothers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                   Euteleostomi;
Murinae; Mus
                                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Jéffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10813 row: h column: 14
High quality sequence stop: 804.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGTCTGGCTATGAGATCCCCCAACTGTCACAGTACCTGGACTACATCCATGTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361 ATATGACCTCCATGGCTCCTGGGAGGCTACACTGGGGAGAATAGTCCTCTTTACAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTCCTGAGAACCGCCAGACTTTCATCACCTCAGTCATCAAATTCCTGCGCCAGTATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGACGGGCTGGACTTGACTGGGAGTACCCTGGCTCTCGTGGGAGCCCTCCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTACGACCTCCATGGCTCCTGGGAGGGCTACACTGGAGAGAACAGCCCCCTCTACAATA
                                                                                                                                                                                                                                                                                                                                                                                þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      376 AACTCTCCTGGCCATTGGAGGCTGGAACTTCGGGACTGCCCCTTTCACTGCCATGGTTTC
                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; 1 (Dases 1 to 809)
NIH-WGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 623.2; DB 12;
Pred. No. 1.7e-162;
0; Mismatches 109;
 809
Mus
                     NCI_CGAP_SG2
                                                                        GI:14216957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sch 38.4%;
il Similarity 86.4%;
699; Conservative
                   602785352F1 NC
mRNA sequence.
                                                                                                                                   Mus musculus
                                                                                                                 mouse
                                                                        BG866417.1
                                                        BG866417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    193
                                                                                            EST.
house 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

```
1095 ATGTGTGGGTTGGCTATGACATCAAGAGCTTCGATATTAAGGCTCAATGGCTTAAGC 1154
                                                                              TGGGCCCTATGCCAAGGAGTCTGGGATCTGGGCTTACTACGAGATCTGTACCTTCCTGAA 1035
                                                                                                        1036 AAATGGAGCCACTCAGGGAT-GGGATGCCCTCAGGAAGTGCCTTATGCCTATCAGGGCA 1094
915
                                        540
                                                   1155 ACAACAAATTTGGAGGCGCCATGGTCTGG 1183
                                                                                                                                                                    916
                                                                                                                                               721
                                    qq
                                                    ò
                                                                셤
                                                                                         op.
                                                                                                        δ
                                                                              ò
                                                                                                                  a
                                                                                                                              ò
                                                                                                                                              ద
                                                                                                                                                           ò
```

Search completed: July 3, 2003, 08:40:34 Job time: 2441.98 secs

us-10-004-219b-3.rge

```
GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
```

July 3, 2003, 02:31:01; Search time 4011.96 Seconds (without alignments) 11062.367 Million cell updates/sec US-10-004-219B-3 1525 1 atggccaagctacttctcgt......taaaattggtagccaaaaca 1525 4109280 Total number of hits satisfying chosen parameters: 2054640 seqs, 14551402878 residues Post-processing: Minimum Match 08
Maximum Match 1966
Listing first 45 summaries OM nucleic - nucleic search, using sw model IDENTITY_NUC Gapop 10.0 , Gapext 1.0 Minimum DB seq length: 0 Maximum DB seq length: 2000000000 GenEmb1:* Title: . Perfect score: Sequence: Scoring table: Database : Searched: Run on:

em_htgo_mus:* em_htgo_other:* em_htg_inv:* em_htg_other:* em_htg_mus:* em_htg_pln:* em_htg_rod:* em_htgo_hum:* em_vi:* em_htg_hum:* em_htg_vrt:* em_sy:* gb_ro: * gb_sts: * gb_sy: * gb_un: * em_ro:* em_sts:* gb_ba:* gb_htg:* em_fun: em_ov:* em_in:* em_om: em_or: 1 фр_ом: * фр_оv: * gb_pat:

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

00000000000000000000000000000000000000	233333 100	AF290003 AF290003 BC034548 BC034548 AF1290004 AF1290004 AXA05989 AXA05989 AXA05989 AXA05989 AXA05589 AXA05589 AXA05589 AXA05589 AXA05589 AXA05557 AXO65557 AXO65550 AXI08750 AXI08750	NF290003 M NF290003 M APE15451 M APE154571 M APE15457 M APE15459 M APE15459 M APE15450 M APE15461
339.4 22.3 333.2 21.8 331.4 21.7		E09045 AK055165 OAU16719	AKO55165 Homo sapi U16719 Ovis aries

4	1530 bp mRNA linear KOD 2/-FEB-2001	Mus musculus acidic mammalian chitinase precursor, mRNA, complete				•			Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.		Boot, R.G., Blommaart, E.F., Swart, E., Ghauharali-van der Vlugt, K.,		
;	linear	precursor,							Vertebrata;	thi; Muridae		auharali-van		
	DP MRNA	chitinase							Craniata;	Sclurogna		art, E., Gh	Bijl, N., Moe, C., Place, A. and Aerts, J.M.	
1	1530	mammalian			7290				Chordata;	Rodentia;	_	t, E.F., Sw	ace, A. and	
•		lus acidic			AF290003.1 GI:12597290		lus.	lus	; Metazoa;	Eutheria;	1 (bases 1 to 1530)	, Blommaar	Moe, C., Pl	
	AF290003	Mus muscu	cds.	AF290003	AF290003.		Mus musculus.	Mus musculus	Eukaryota	Mammalia;	1 (bases	Boot, R.G.	Bijl, N.,	
AF290003	rocus	DEFINITION		ACCESSION	VERSION	KEYWORDS	SOURCE	ORGANISM	٠		REFERENCE	AUTHORS		

RESULT 1

542

600

602 99 722 780

720

662

840 842 900 902 960

782

```
1201 TCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGAGTGGGGGGTGGAAGCTCCGGAGGAAGC 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961 TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1023 AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAAATTTCTGCACTCTCCTTTACTCCTCACAAAAGTAACTATCTTCCCTTTAACCTTA
           GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                      CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                   CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                         ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                         841 ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                     1021 AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGCTGCTGTAGCTGGTGGGATTTCCAACATCCAGGCTGCCTATGAGATCCCTGAACTT
                                                                       GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1141 TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTGTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCAATAAAATTGGTAGCCAAAACA 1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1443
            181
                                                           541
                                                                                  543
                                                                                                                                                                                                                                 723
                                                                                                                                                                                                                                                                                                                                843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1503
                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1323
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
                                 g
                                                                            g
                                                                                                           δ
                                                                                                                                   g
                                                                                                                                                           ò
                                                                                                                                                                                셤
                                                                                                                                                                                                          οχ
                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                         οχ
                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                          ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                    .
                                                                                                                                                                                                                                                                                                                   /translation="Makilluvglalilnaqugsaynlicyfthwaqypbglgsfrpd
Dippolitivaragonqueittirnbnuvthyrakboliknrnskiktilajogwbp
Tapptthwytstgonropeitysvikelroygedclidhev pgsrgsppodkhlftvluk
Emreapedealespydstryvaragosisniqasvedeelskyldpethyry
Edytgensplykypperlayvarandagosisniqasvedeelskyldpethrp
SDNGTGaptscongpagaytrojagewayyeictregatewydasogypyakkanew
Gydniksfsykaqwikonnegamiwaldlddftgscadbkagosypyakkanewi
GCTAPDydsgeyytpegsgggsggssggssggsggfcabkaddkyvbbrnaewgcing
ITYQQHCQAGLYFDTSCNCCNWP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a novel acidic mammalian chitinase distinct from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                                                               Biochemistry, Academic Medical
Meibergdreef 15, Amsterdam 1105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCCAAGCTACTTGTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                     /codon_start=1
/product_a_aoidic_mammalian.chitinase precursor"
/protein_id="AAG60018 1"
/db_xref="G1:12597291"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10; Length 1530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                       Swart, E. and Aerts, J.M.
                                                                                                                                                                                                     /sca_milong"
/tissue_type="lung"
/dev_stage="9-11 weeks"
3. .1424
/EC_number="3.2.1.14"
/note="chitinase precursor; AMCase"
                      (9), 6770-6778 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                   2 (bases 1 to 1530)
Boot,R.G., Verhoek,M., Swart,E. and
Direct Submission
Submitted (26-JUL-2000) Dept. of Bi
Center, University of Amsterdam, Me
AZ, The Netherlands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1525;
Pred. No. 0;
                                                                                                                                                          /organism="Mus musculus"/strain="BALB/c"
                                                                                                                                                                                   /db_xref-"taxon:10090"
                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                              366 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex-"male"
           chitotriosidase
J. Biol. Chem. 276
21125893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100
Best Local Similarity 100
Matches 1525, Conservative
Identification of
                                                                                                                                                                                                                                                                                                                                                                                                                               383
                                                11085997
                                                                                                                                                                                                                                                                                                                                                                                                                               382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                             PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                      JOURNAL
MEDLINE
                                                                                                                                   FEATURES
TITLE
```

ð g ð 8 ò q g

ογ

g

ò

à

g

ò QQ ò

1140 1142 1200

1262 1320 1322 1440

1020 1022 1080 1082

```
1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1081 GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT 1140
                                                                                                                                                                                240
                                                                                                                                                                                                                                       120
                                                                                                                   180
                                                                                                                                                  183
                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                  363
                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                       483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   963
                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          900
                         63
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                     ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGGACTGGGAAA
                                                                                                                                                                                                                                                                                                                                                                                            ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTCAGTGTTAAGGCTCAGTGCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                                                         61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                     TTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                         421 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           784 ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   904
                                                                                                                  121
                                                                                                                                                                              181
                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                    셤
                                                       à
                                                                                  셤
                                                                                                                à
                                                                                                                                              g
                                                                                                                                                                              à
                                                                                                                                                                                                         g
                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                    쉽
                                                                                                                                                                                                                                                                                                     å
                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIANL at: http://image.llnl.gov Series: IRAM Plate: 24 Row: h Column: 16
This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein.

1. coation/Qualifiers
1. 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="Locusid:81600"
/translation="MAKLLLWTGLALLLNAQLGSAYNLICYFTNWAQYRPGLGSFKPD
DINPCLCTHLIYAFAGWONNEITTIEWNDVTLYKAFNDLKWINNSKLKETLATGGWNFG
TAPFTTWYSTGONROTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDKHLFTYLVK
EMREAFEQEAIESNRPRLMYTAAVAGGISNIQAGYEIPELSKYLDFIHWHTYDLHGSW
EGYTGBNSBLYKXPTEFGSNATLNYDYWNYWRNNGAPEKLIVGFPEFGHFILRNP
SDNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEWDLASGOFPFYHFILRNP
SDNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEWDLASGOFPFYTRUNG
GYDNIKSFSVYAAQMINALDLDDFTGSFCDQKFPFITSTLNKALGISTF
GCTAPDVPSEDYTTPFGSGGSSGGSSGGSSGCADKADGLXPVADDRNAFWQCING
                                       mRNA linear ROD 07-AUG-2002 clone MGC:19045 IMAGE:4189080,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 1557)
                                                                                                                                                                                                    Strausberg. R. Direct Submission Direct Submission Submission Submitted (24-JUL-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map="FVB/N"
/clone="MGC:19045 IMAGE:4189080"
/tlssue_type="Salivary gland, 10 week old female mouse"
/clone_lib="NCI_CGAP_SG2"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                 Center code: BCM-HGSC
Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M.,
Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D.M.
Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                            NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs.remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing Dy: Baylor College of Medicine Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10; Length 1557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33
                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="chitinase, acidic"
/protein_id="AAH34548.1"
/db_xref="GI:21961191"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1520.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
/db_xref="taxon:10090"
                                      bc034348 1557 bp Mus musculus, chitinase, acidic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ITYQQHCQAGLVFDTSCNCCNWP" 382 c 366 a 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366 g
                                                                  mRNA, complete cds.
BC034548
BC034548.1 GI:21961190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 5.0 Matches 1522; Conservative
                                                                                                                                              Mus musculus
                                                                                                               MGC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                    DEFINITION
                                                                                                                                             ORGANISM
                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                               ACCESSION
      RESULT 2
BC034548
                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                      rocus
```

g ò 염 à a ò 셤 ò a

1204 1261

1201

1324

1381

ò

g

1321 1264

1444

q ö g

1504

VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL

REMARK COMMENT

DEFINITION

BC011134 LOCUS

RESULT 3

ACCESSION

1501

1441

à

```
/codon_start=1
/codon_start=1
/product="Similar to eosinophil chemotactic cytokine"
/protein_id="AaA111134.1"
/db_xref="G1:15029812"
/translation="MVSTSONRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDK
HLFYLVKBRMEAFDEALESNRFRLMYTAAAAGGISNIQAGYETBELSKYLDFIHVW
HLFYLLVKBRMEAFDEALESNRFRLMYTAAAAGGISNIQAGYETBELSKYLDFIHVW
TYDLHGSWEGYTGENSDLYKXPTETGSNAYLNVDYNNYWKNNGAPARKLIVGFPEYG
HTFILRNPSDNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEVWDASOEVPY
AYKAMEMGYDNIKGNRFRYTROPGSGAGGSSGGSSGGSGGCADKADGLYPUTSTLN
KALGISTEGCTAAPDYPSERLKONNFGGAAWAAIDLDDFTGSFCDGCKFPLTSTLN
KALGISTEGCTAAPDYPSERLKONNFGGAAWAAIDLDBFTGSFCDGCKFPLTSTLN
RAKGISTEGCTAAPDYPSERLKONNF"

AFWQCINGITYQQHCQAGLVFDTSCNCCNWP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGA 482
                                        week old female mouse"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        483 AATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1538;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                    /tissue_type="Salivary gland, 10
/clone_lib="NCI_CGAP_SG2"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                   5;
   /map="FVB/N"
/clone="MGC:18771 IMAGE:4165150"
                                                                                             /note="Vector: pCMV-SPORT6" 323. .1420
                                                                                                                                                                                                                                                                                                                                                                                            Score 1519.8;
                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                              99.78;
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 99.9
Matches 1521; Conservative
                                                                                                                                                                                                                                                                                                                                         393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                      1263
                                                                                                                                                                                                                                                                                                                                                                                                                             AGAAATITCTGCACTÉTCCTTTACTCCTCACCAAAAGTAACTATCTTCCCTTTAACCTTA 1500
                                                                                             1203
                                                                                                                                TCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGAGTGGGGGGTGGAAGCTCCGGAGGAAGC 1260
                                                                                                                                                                                                         TCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGAC 1320
                                                                                                                                                                                                                           AGAAATGCTTTTTGGÇAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAAGCAGGG 1380
                                                                                                                                                                                                                                                                                                     CTTGTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCC 1440
                                                                                                                                                                                                                                                                                                                                                                                              1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BC011134 1538 bp mRNA linear ROD 07-AUG-2002 Mus musculus, Similar to eosinophil chemotactic cytokine, clone MGC:18771 IMAGE:4165150, mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 1538)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission Submitted (25-JUL, 2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution information can be for
through the I.M.A.G.E. Consortium/LinL at: http://image.llnl.gov
Series: IRAK Plate: 24 Row: e Column: 11.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Μ.
M.
1144 TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGGTCCTGACGTGCCT
                                                                                                                                                   TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help|desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement; Jeffrey E. Green, M.D.
Tissue Procurement; Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Baylor College of Medicine Human Genome
Sequencing Center
Center code: BCM-HGSC
Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amg@bcm.tmc.edu
Gunarathe, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M.
Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D.
Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R.G., Muzny,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BC011134.1 GI:15029821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     house mouse.
```

242 240 300

362 360

302

422

540

602 900

480 542 662

999 722 720

source

FEATURES

ö

Gaps

; 0

62 9

```
/product="putative chitinase precursor"
/protein_id="aar31644.1"
/brotein_id="aar31644.1"
/db_xref="G1:6934190"
/translation="artilvyrelallinaolgsaynlicyfynwaoyrpglgsrkpDD
/translation="artilvyrelallinaolgsaynlicyfyrnwaoyrpglgsrpDD
/translation="artilvyrelallinaolgsaynlicyfyrnwskrkyrliaiggwyrey
apfyrwyszonwoyyryrelycyfyrelallinayncyrwe
gytgensplwyrathayvadgisnlodsyeipelskyldeinyre
gytgensplyyryptgsroynyraywywynwyknngapaekilygpegygyfyrelucyre
yndigaptgsgongoygayyeicyfyrelyen
yndigaptgsgongoygayyeicyfyrelyen
yndigaptgsgongoygayyeicyfyrelyen
yndigaptgsgongogsgoggsgosgosgoggecabkadgiyrbaddnafwdcisfge
cyapdypsepyytypgoggoggsgosgosgosgordbyraddnafwdcisfre
Price, P.A., Harris, S.C. and Williamson, M.K.
Direct Submission
Submitted (26-MAY-1999) Biology, University of California, San
Diego, 9500 Gilman Drive, Mail Code 0368, La Jolla, CA 92093-03687, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           364 TCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGACTGGGACTGGGAATAC 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCCTGATGACATTAACCCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 CAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244 GACTIGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 GACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1526;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  region; active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glu;
t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="putative chitinase"
394. .417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 1517.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        invariant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 conserved
                                                                                                                              /db_xref="Arcc:1476668"
/db_xref="taxon:10090"
/clone="IMAGE 1209227"
/tissue_type="skin"
<1. .1526
<1. .1526
<1. .1419
                                                                                                       /organism="Mus musculus'
/strain="ATCC1476668"
                                                                                                                                                                                                                                                                                                                                                                                                        TYQQHCQAGLVFDTSCNCCNWP"
                                                                           Location/Qualifiers
1. .1526
/organism="Mus muscu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="putative inv
381 c 364 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"putative
                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                          <1. 60
/gene="YNL"
61. 1.11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.5%;
llarity 99.8%;
Conservative
                                                                                                                                                                                                               <i. .1419
/gene="YNL"
                                                                                                                                                                                                                                                                                                                                                                                                                                               61. .1416
/gene="YNL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="YNL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene-"YNL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match
Best Local Similarity
Matches 1519; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                         TITLE
JOURNAL
                                                                                                                                                                                         gene
            AUTHORS
                                                                                                                                                                                                                 CDS
                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                1082
                                                                                                                                                                                                                                                                                                                                       1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1380
                                                                                                                                                                                                                                                                                              TGTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCCAG 1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1381 TGTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCCATTCTTCCAG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA linear ROD 08-FEB-2000 precursor (YNL) mRNA, partial cds.
                                                                                                                                                                                                                            CCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAG 1022
                                                                                                                                                                                                                                                                                                                                                                                          1143 TACTITGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCTTC 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGACAG 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAATTTCTGCACTCTCCTTTACTCCTCACCAAAAGTAACTATCTTCCCTTTAACCTTATG 1502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1441 AAATTCTGCACTCTCTTACTCCTCACCAAAAGTAACTATCTTCCCTTTAACCTTATG 1500
                                     780
                                                                842
                                                                                         840
                                                                                                                      902
                                                                                                                                               900
                                                                                                                                                                          962
                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus. 1 (bases 1 to 1526)
Price, P.A., Harris, S.C. and Williamson, M.K.
YNL, A Putative Mouse Chitinase
Unpublished to 1526)
                                                                                                                   CAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCAT
                          GCCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTC
                                                                                                                                                                                        CCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAG
                                                                                                                                                                                                                                                                                  CTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGC
                                                                                                                                                                                                                                                                                                                                       CATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATGTCAAGCAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1321 AAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCATGTTTTTGGCAGTGCTT
                                                                TGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF154571 1526 bp
Mus musculus putative chitinase
AF154571.1 GI:6934189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATAAAATTGGTAGCCAAAACA 1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1501 CAATAAAATTGGTAGCCAAAACA 1523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1323
                                                                                                                   843
                                                                                                                                             841
                                                                                                                                                                                                                                                                                                           1021
                                                                                                                                                                                                                                                                                                                                      1083
                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                               1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1503
                                                                783
                                                                                         781
                                                                                                                                                                        903
                                                                                                                                                                                                   901
                                                                                                                                                                                                                              963
                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                1023
                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
AF154571
LOCUS
DEELNTTION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۰۶
                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                        g S
                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                   g
                                                               ò
                                                                                    q
                                                                                                                 ò
                                                                                                                                           g
                                                                                                                                                                       ò
                                                                                                                                                                                             q
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                        οχ
                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

ö

```
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          399 g
                                                                                               AF290004
AF290004.1 GI:12597292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 83.4%;
Matches 1198; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468 c
                                                                                                                       Homo sapiens
                                                                                                                                Homo sapiens
                                                                        AF290004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sig_peptide
BASE COUNT 3
ORIGIN
                1504
                                 1501
                                                                                                                                                                                                                                                                             source
                                                                               DEFINITION
                                                                                                                              ORGANISM
                                                                                                                                                                                                                             AUTHORS
TITLE
JOURNAL
                                                         RESULT 5
AF290004
                                                                                                ACCESSION
                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                               AUTHORS
                                                                                                                                                                                                      MEDLINE
                                                                                                                                                        REFERENCE
                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                               TITLE
                ò
                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                    1023
                                                                                                                                                                                                                                                                                                                                   1020
                                                                                                                                                                                                                                                                                                                                                TTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCC 1083
                                                                                                                                                                                                                                                                                                                                                                                  1143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1380
                                                                                                                                                                                                                                                                                                                                                                                         AATTCTGCACTCTCCTTTACTCCTCACCAAAGTAACTATCTTCCTTTAACCTTATGC 1503
                                                                                                                                                                                                                                                                                    963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCCAGA 1443
                                                                       540
                         483
                                900
                                                                                                                        663
                                                                                                                                                      723
                                                                                                                                                              783
                                                                                                                                                                                                     780
                                                                                                                                                                                                                      843
                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                           AATGTGGATTATGTCÄTGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATT
                                                                                                                                                                                                                            GCCTACTATGAGATTTGCCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCC
                                                                                                                                                                                                                                                                                                                          CCAGGCTCACGTGGGGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAA
                                                                                       ACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTC
                                                                                                                                                                                                     AATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATT
                                                                                                                                                                                                                                                                                                                  CAAGAAGTGCCCTATAAGGCCAACGAGGGCTTGGCTATGACAATATCAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAAGCAGGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACT
                                                                                                                       AAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTAC
                                                                                                                                                                                                                     GTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATT
                                                                                                                                                                                                                                                   GGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCCCTATACCAGACAGGCTGGGTTCTGG
                                                                                                                                                                                                                                                                                                                                                                                 ATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                 ACTITGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGACAGA
                                                                                                                                                                                                                                                                                                                                                 1024
                                                                                                                                                                                                                                                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                 1084
                                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1444
        361
                        124
                                       421
                                                       484
                                                                       481
                                                                                        544
                                                                                                      541
                                                                                                                      604
                                                                                                                                     601
                                                                                                                                                     664
                                                                                                                                                                     199
                                                                                                                                                                                     724
                                                                                                                                                                                                    721
                                                                                                                                                                                                                   784
                                                                                                                                                                                                                                   781
                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                   904
                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                  964
                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1384
       셤
                                      셤
                                                                   Q
                                                                                                                 ò
                                                                                                                                   8 6 8
                                                                                                                                                                                ò
                                                                                                                                                                                                q
                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                g
                       ò
                                                   ð
                                                                                      ò
                                                                                                  g
                                                                                                                                                                                                                οχ
                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
/codon_start=1
/product="acidic mammalian chitinase precursor"
/product="acidic mammalian chitinase precursor"
/protein_id="AAG60019.1"
/db_xref="d1:12597293"
/translation="MTKLILLTGLVLILNLQLGSAYQLTCYFTNWAQYRPGLGRFMPD
NIDPCLCTHITAGARQNNEITTIENNDYTLSARGNEYBRAGSPEDRANST
NAPFTAMVSTPENNGYFTITSVIKELAYGFSTGLDFDMEYPGSRGSPPQDKHLFTVLVQ
EMREAFEQEARQIPTRYSTMENTANYTAACAISNIQSGYEIPOLSQYLDY IHWMYDLHGSW
EGYTGENSPLYKYPTDJGSNAYLNVDYVMNYWKDNGAPAEKLIVGFPTYGHFILSNP
1441 AATTICIGCACTCICCITIACICCICACCAAAGIAACIATCIICCCITIAACCITAIGC 1500
                                                                                                                                                                                                                                                                 PRI 27-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNTGIGAPTSGAGPAGPYAKESGIWAYYEICTFLKNGATQGWDAPQEVPYAYQGNWWY
SYDNIKSEDITAQWLKHNKFGGAWWAADLDDFTGTFCNGGKPPLISTLKKALGIAGSA
SCTARAADPIEPITAAPSGSGNGSGSSSSGGSGGGGGGTAVADIATYPVANNRNAFWHC
VNGVTYQQNCQAGLVFDTSCDCCNWA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. (bases 1 to 1625)
Boot, B. Blommaart, E.F., Swart, E., Ghauharali-van der Vlugt, K., Bijl, N., Moe, C., Place, A. and Aerts, J.M.
Identification of a novel acidic mammalian chitinase distinct from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /EC_number="3.2.1.14"
/note="chitinase precursor; AMCase; chitinase activity demonstrated by expression in COS cells; similar to sequences presented in Genbank Accession Numbers AB025008 and AB025009"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                                                              1625 bp mRNA linear PRI 27-FEB-200
nalian chitinase precursor, mRNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 (bases 1 to 1625)
Boot, R.G., Verhoek, M., Swart, E. and Aerts, J.M.
Direct Submission
Submitted (26-JUL-2000) Dept. of Biochemistry, Academic Medical
Center, University of Amsterdam, Meibergdreef 15, Amsterdam 1105
AZ, The Netherlands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ATGCCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104 ATGACAAAGCFTATTCTCCTCACAGGTCTTGTCCTTATACTGAATTTGCAGCTCGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1041; DB 9;
Pred. No. 4.3e-313;
0; Mismatches 230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Biol. Chem. 276 (9), 6770-6778 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .1625
/organism="Homo sapiens"
/db_xref="taxon:9606"
/tissue_type="stomach; lung"
104. .1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 371
                                                                                                                                                                                                                                                                                         Homo sapiens acidic mammalian
                                                                                          AATAAAATTGGTAGCCAAAACA 1525
```

Db 1093 GCCATTGACCTGGATGATTTCACAGGCAACTTCTGCAACCAGGGCAAGTTCCCCTGATA 1152 Qy 1141 TCTACTTTGAACAAAGCCCTTGGCATTCTGCAAGGTTGCACGCTCTGACGTGCT 1200 1153 AATACCTTGAAGGTGCTCTTGGCAAGGTGGAACTCCTCCAGGAGTCC 1212 Qy 1201 TCCGAGGCAGTGACTCTTCCAGGAAGTGGGAACTCCGCAGGAAGC 1260 1213 AGTGAGCCCAACACACACAGAAGTGGAAGTGGGAAGTCCGGAGAAGC 1269 Qy 1261 TCTGGAGGAGTGGATTCTGCCGAAAGTGGGAAGTGGAAATAAGACAGCAGCAC 1269 Qy 1270 TCCGAGGGTGATACTGTGCCGCAAAGTGGCTTCACCCTGTGGCAGTAC 1329 Qy 1321 AGAAATGCTTTTGGCAGTGCATGCAAGCTGATGCCTCTACCCGGGGATAAC 1329 Qy 1321 AGAAATGCTTTTTGGCAGTGCATGAATGACAAACAGAATTGCTGACGCGGTAAC 1329 Qy 1331 AGAAATGCTTTTTGGCAGTGCATCACATACCAGAGCTGCTGACTGGC 1389 Qy 1381 CTTGTTTTGAAATGCTGCAAATGCTGCAATACAAACAGAATTGCTGACTGGC 1389 Qy 1381 CTTGTTTTTGAAATGCTGCAAATGCTGCAATACAAACAGAATTGCTGACTGGC 1389 Cy 1381 CTTGTTTTTGAAATGCTGCAACTGCCAATACAAACCAAA 1428 [IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RESULT 7 AB025008 LOCUS COMPLETE CAS. DEFINITION AB025008 ACCESSION AB025008 ACCESSION AB025008 COMPLETE CAS. NOVEL MEMBER TSA1902-L MENA for novel member of chitinase family, ACCESSION AB025008.1 GT:6467176 KEYWORDS NOVEL MEMBER OF CHITINASE family; TSA1902-L. HOMO Sapiens CDNA to MRNA. OKGANISM HOMO Sapiens CDNA to MRNA. BUARTYOTA; METAZOA; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 (sites) ANTHORS Salto,A., Ozaki,K., Fujiwara,T., Nakamura,Y. and Tanigami,A. TITLE Isolation and mapping of a human lung-specific gene, TSA1902, encoding a novel chitinase family member	JOURNAL Gene 239 (2), 325-331 (1999) MEDLINE 20018184 REFERENCE 2 (bases 1 to 1354) AUTHORS Saito, A.; Ozaki, K., Fujiwara, T.; Takahashi, E. and Tanigami, A. TITLE Direct Submission JOURNAL Submitted (16-MAR-1999) Akihiko Saito, Otsuka Pharmaceutical Co., Itd., Otsuka GEN Research Institute; 463-10 Kagasuno Kawauchi-cho, Tokushima, Tokushima 77-0192, Japan (E-mail:saito@otsuka.gr.jp, Tel:81-88-665-2888, Fax:81-88-637-1035) FEATURES 1. 1354 Cocation/Qualifiers /db_xref="taxon:9606" /db_xref="taxon:9606"	CDS 1571263 / Gene="TSA1002-L" / Codon_start=1 / Product="novel member of chitinase family" / Product="nove
	ACCTCAGTCATCAAATTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGACTGGACTGGACTGGACTGGACTGGACTGGACTGGATTCCTACACACCAGTATGGATTTGATGGATTTGATGGATTTGATTGGAGGGTGGATTTGATTGGAGGA	601 TCTAAGTACCTGGATTTCATCATGTCATGACATATGACCTCCATGGGAGGC 660	

σ

1157

```
AAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGA 1316
       TGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAAGC
                                                                                                                                                                                                                                                                                                                              Score 854; DB 6; 1
Pred. No. 1.1e-254;
0; Mismatches 200;
                                                                                                                                                                                                                                    product"
                                                                                                 DNA
                                                                                                 1369 bp
: WO0222660.
                                                                                                                                                                                                  Localion/Qualifiers
1. 1369
7. Organism="Homo sapiens"
7. Diganism="taxon:9606"
154. . 1260
7. Ore="unnamed protein pro
                                                                                                        from Patent
                                                                                                AX405989
Sequence 404 from Pateni
AX405989
AX405989.1 GI:21439417
                                                                                                                                                                                                                                                                                                                              56.0%;
larity 82.6%;
Conservative
                                                                                                                                       Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                            327
                                                                                                                              .
human.
                                                                                                                                                                                                                                                                                                                                ha
Local s.
993;
1257
                          1317
                                       1158
                                                                                                                                                                                                                                                                                                                                                                                                125
                                                                                                                                                                                                                                                                                                                                                                                                                                        416
                                                                                                                                                                                                                                                                                                                                                                                                                                                     245
                                                                                                                                                                                                                                                                                                                                                         236
                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                  296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   416.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               305
                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                      DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                      Best Loca
                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                   RESULT 8
AX405989
LOCUS
                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                  AUTHORS
                                                                                                                                                            REFERENCE
                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                 ORIGIN
           g
                         à
                                   g
                                                οy
                                                              g
                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                  δý
                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                  ۰۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                  පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                 TTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCTTCCGA 1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAGTGACTACTCCTCC-----AGGAAGTGGGAGTGGGGGTGGAAGCTCCGGAGG 1256
                                                                                                                                                                                                                                                                                                                                                       AGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTT 1025
                                                                       197
                                                                                                                                                                                                                     245
                                305
                                            137
                                                          365
                                                                                   425
                                                                                                257
                                                                                                              485
                                                                                                                          317
                                                                                                                                        545
                                                                                                                                                    377
                                                                                                                                                                  605
                                                                                                                                                                              437
                                                                                                                                                                                            665
                                                                                                                                                                                                         497
                                                                                                                                                                                                                                                 785
                                                                                                                                                                                                                                                             617
                                                                                                                                                                                                                                                                          845
                                                                                                                                                                                                                                                                                       677
                                                                                                                                                                                                                                                                                                    905
                                                                                                                                                                                                                                                                                                                 737
                                                                                                                                                                                                                                                                                                                                                                     857
                  11
                                                                                                                                                                CTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGTGGAACTTTGG
                                                                AACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTC
                                                                                   AGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGGACTGGGAATACCC
                                                                                          GCGTGAAGCTTTTGAGCAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGC
                                                                                                                                             TGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGT
                                                                                                                                                                                                                                                      TGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGG
                                                                                                                                                                                                                                                                                 TGCCCCTACCTCTGGTGATGCCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGC
                                                                                                                                                                                                                                                                                                           798 GGAAGIGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACGTCAAGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGAAGAAGGCCCTTGGCAGAGTGCAAGTTGCACGGCTCCAGCTCAGCCCATTGA
                                                                                                                                                                                                                                                                                                                                                                                1026
                                                                                                                                                                                                                                                                                                                                                                                               828
                  18
                                            78
                                                         306
                                                                      138
                                                                                   366
                                                                                                198
                                                                                                            426
                                                                                                                         258
                                                                                                                                      486
                                                                                                                                                    318
                                                                                                                                                                                           909
                                                                                                                                                                                                        438
                                                                                                                                                                                                                                   498
                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                                                             558
                                                                                                                                                                                                                                                                          984
                                                                                                                                                                                                                                                                                                    846
                                                                                                                                                                                                                                                                                                               678
                                                                                                                                                                                                                                                                                                                             906
                                                                                                                                                                                                                                                                                                                                          738
                                                                                                                                                                                                                                                                                                                                                                                                            1086
                                                                                                                                                                                                                                                                                                                                                                                                                         918
     186
                                        g
                                                                                           90
04
05
                                                                                                                                  ογ
                                                                                                                                                90 A
                                                                                                                                                                                       9 9 9
9 6
                                                                                                                                                                                                                                            oy
oy
                                                                                                                                                                                                                                                                                  g &
                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                  5 G
                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                       S S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
     ò
                요
                              δ
                                                         oy
oy
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                               요
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

14-JUN-2002 ï Ren, F., 355 415 475 535 124 184 244 304 364 Euteleostomi; CTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCT Gaps Tang, Y.T., Liu, C., Zhou, P., Asundi, V., Zhang, J., Zhao, Q.A., Xue, A.J., Yang, Y., Wehrman, T. and Drmanac, R.T.
Novel nucleic acids and polypeptides
Patent: WO 0222660-A 404 21-MAR-2002;
HYSEQ, INC. (US) 1428 6 PAT Chordata; Craniata; Vertebrata; E Primates; Catarrhini; Hominidae; Length 1369 linear

Sun

```
/translation-"MAKLILVTGLAILLNVQLGSSYQLMCYYTSWAKDRPIEGSFKPG
NIDPCLCTHLIYAFAGMQNNEITYTHEQDLRDYEALNGLKDKNTELKTLLAIGGWKFG
PAPFSAMVSTPQNRQIFIQSVIRFLRQYNFDGLNLDWQYPGSRGSPPKDKHLFSVLVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMRKAFEEESVEKDI PRLLLTSTGAGI I DVI KSGYKI PELSQSLDY I QVMTY DLHDPK
DGYTGENSPLYKSPY DIGKSADLNVDSI I SYWKDHGAASEKL I VGFPA YGHTFILSDP
SKTGIGAPTI STGPPGKYTDESGLLAYY EVCTFLNEGATEVWDAPQEVPYAY GGNEWV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GYDNVRSFKLKAQWLKDNNLGCAVVWPLDMDDFSGSFCHQRHFPLTSTLKGDLNIHSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGC 120
                                                                                                                  2 (bases 1 to 1525)
Chang, N.C., Hung, S.I., Hwa, K.Y., Kato, I., Chen, J.E., Liu, C.H. and
                              Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72
                  Euteleostomi;
                                                                         protein (YM-1)
peritoneal macrophages
                                                                                                                                                                                                                                                Chang, N.-C.A., Liu, C.-H. and Chang, A.C.
Direct Submission
Submitted (27-APR-1993) Microbiology and Immunology, National
Yang Ming University, 155, Sect. II, Li-Noon St, Taipel, Taiwan
                                                                                                                                                                                                                                                                                                                                                              Submitted (13-NOV-2000) Microbiology and Immunology, National Yang-Ming University, 155, Sect. II, Li-Noon St, Taipei, Taiwan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                      112, R.O.C. Sequence update by submitter
Sequence update by submitter
On Nov 13, 2000 this sequence version replaced gi:202441.
Location/Qualifiers
1. .1525
/organism="Mus musculus"
/db_xref="taxon:10090"
/clone_lib="ppc in lambda gtll and ZAPII"
/dev_stage="adult"
ne 1.1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1525;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                  Vertebrata;
                                                                                                                                                                expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="secretory protein precursor"
/protein_id="AAB62394.2"
/db_xref="G1:11140877"
                                                                                                                                                             A macrophage protein, Yml, transiently expra
inflammation is a novel mammalian lectin
J. Biol. Chem. 276 (20), 17497-17506 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 10;
                                                       Chang, N. C.A., Liu, C. H. and Chang, A.C. Molecular characterization of a secretory transiently expressed by activated murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 714.6; DB 10;
Pred. No. 3.7e-211;
); Mismatches 299;
                  Craniata;
                                                                                                                                                                                                                                                                                                                                   Chang, N.-C.A., Liu, C.-H. and Chang, A.C. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein"
Mus musculus
Eukaryota, Metazoa, Chordata,
Mammalla, Eutheria, Rodentia,
1 (bases 1 to 1525)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Ym1"
/product="secretory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1487. .1492
/gene="Yml"
1507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.9%;
llarity 74.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13. .75
/gene="Ym1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="Ym1"
                                                                                                                                                                                                                                                                                                           2, R.O.C.
(bases 1 to 1525)
                                                                                                                                                                                                                                     (bases 1 to 1525)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="Ym1"
a 343 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76. .1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SCKGPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
Matches 894; Conserv
                                                                                                                                                Chang, A.C.
                                                                                                                                                                                                                                                                                                                                                   Direct Sub
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
ORIGIN
                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                       MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                             REFERENCE
                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                      JOURNAL
                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                           REMARK
                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                      956 ATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATA 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGACTTCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACG_1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGAGCITCAGIGITAAGGCTCAGIGGCTTAAGCAGAACAATITIGGAGGIGCCAIGA 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1196 TGCCTTCCGAGCCAGTGACTACTCCTCC-----AGGAAGTGGGGAGTGGGGGGTGGAA 1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTCCGGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACC 1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1367 ATTGTCAAGCAGGCTTGTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCT 1426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              715
                                                                                                                                                                                                                                    835
                                                                                                                                                                                                                                                                                                                                                   955
                                                                                                                                                                                                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1025 AGCCCATTGAGCCAATAACTGCTGCTCCCAGTGGCAGGGGAACGGGAGCGGGAGTAGCA 1084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTGGCAGATGAAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGC 1366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROD 15-JUN-2001
                                                         655
                                                                                                                                                                           775
                                                                                                                                                                                                                                                                                            895
                            424
                                                                                     484
                                                                                                                                              544
                                                                                                                                                                                                       604
                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                     724
                                                                                                                                                                                                                                                                                                                                                              904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M94584 111140876 1525 bp mRNA linear ROD 15-JUN-200 M94584.2 GI:11140876
AGGGCTACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATG
                                                                                                                                  CCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCCAGCTGAGA
                                                                                                                                                                                          AGCTCATTGTTGGATTCCCAGAGTATGGACACCCTTCATCCTGAGAAACCCCTCTGATA
                                                                                                                                                                                                                                                  ATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGCCGCCTATACCAGACAGGCTG
                                                                                                                                                                                                                                                                                                         GGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                       AACTITCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GA 1266
                                                                                                                                             185
                                                                                                                                                                                                                                 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1076
                                                         969
                                                                                  425
                                                                                                                959
                                                                                                                                                                         716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1145
                                                                                                                                                                                                                                                                                                                                                968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
M94584
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                         셤
                                                      ò
                                                                                 셤
                                                                                                             ò
                                                                                                                                          q
                                                                                                                                                                        ö
                                                                                                                                                                                              g
                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
```

```
/translation="Makilutyrglatilinvolgssyolmcyytswakdprpiegsfkpg
/translation="Makilutyrglatilinvolgssyolmcyytswakdprpiegsfkpg
NIDPCLCTHLIYAEAGMONNEITYTHEODLENDYBALMGLKDKNTELKTLAIGGWKFG
PASFSAMVSTPONROIFIQSVIRFLROYNFDGLNLDWQYPGSRGSPPKDKHLFSVLVK
EMRRAFEEESYEKDIPRLLISTGAGTIDVIRSGYKIPELSOSLDYIQVMYDLHDPR
DGYTGENSPLYKSPYDIGKSADLNVDSIISYWKDHGAASEKLIVGFPAXGHTFILSDP
SKTGIGAPTISTGPPGKYDDSGGLAYYEVCTFLNEGATEVWDAPQBYPYAVGNEWV
GYDNVRSFKLKRQWLKDNNLGGAVVWPLDMDDFSGSFCHQRHFPLTSTLKGDLNIHSA
SCKGFY"
                                                               12-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 1506)
Owhashi,M., Arita,H. and Hayai,N.
Gwhashi,M., Arita,H. and Hayai,N.
J. Biol. Chem. 275 (2), 1279-1286 (2000)
2 (bases 1 to 1506)
Owhashi,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTACCAGCTGATGTGCTACTATACCAGTTGGGCTAAGGACAGGCCAATAGAAGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
  1153 TCTACTTTAAAGGGAGATCTCAATATACACAGTGCAAGTTGCAAGGGCCCTTA 1205
                                                                                                                                                                                                                                                                                            οĘ
                                                                                                                                                                                                                                                                                                                                                         version replaced gi:1545818
                                                                ROD
                                                                                                                                                                                                                                                                              Direct Submission
Submitted (06-SEP-1996) Maketo Owhashi, The University or Tokushima, Faculty of Integrated Arts and Sciences; 1-1
Minami-Johsanijan, Tokushima, Tokushima 770, Japan
(E-mail:ohashi@las.tokushima-u.ac.jp, Tel:0886-56-7261,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1506;
                                                               1506 bp mRNA linear ECF-L precursor, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 713; DB 10;
Pred. No. 1.2e-210;
0; Mismatches 300;
                                                                                                                             to mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:10090"
/tissue_type="bone marrow"
1. .1506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product="ECF-L precursor"
/protein_id="BAA13458.2"
/db_xref="G1:6015436"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      412

    1506 / Organism="Mus musculus"

                                                                                                                                                                                                                                                                                                                                            Fax:0886-56-7298)
On Oct 7, 1999 this sequence vo
Sequence Location/Qualifiers
                                                                                                                             CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ნ
                                                             D87757
Mus musculus mRNA for ECF-1
D87757
D87757.2 GI:6015435
ECF-L precursor.
Mus musculus bone marrow ci
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      333
                                                                                                                                                                                                                                                                                                                                                                                                                                                            'gene="mECF-L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene-"mECF-L"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.88;
74.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     338 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similair,
nes 893; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loca
Matches
                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                         ORGANISM
                                                                                                                                                                                                                             JOURNAL
MEDLINE
                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                      RESULT
D87757
                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                        360
                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                  432
                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                   492
                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                      552
                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                                                                                                                                                                                       612
                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               972
                                                                                                                252
                                                                                                                                         300
                                                                                                                                                                  312
                                                                                                                                                                                                                 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC 720
              132
                                       180
                                                             133 TICAAACCIGGIAAIAIIGACCCCIGCCIGIGIACICACCIGAICIAIGCCIIIIGCIGGA 192
                                                                                                    TCCCAAGAAGTGCCCTATGAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                         ACTICCACAGGAGCAGGAATCATIGACGIAATCAAGICIGGGIACAAGAICCCIGAACIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGCCTACTATGAGATTTGCACCTTTCTGAGAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                                                                                                                                         AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                     361 ACCTCAGTCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1081 GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT
                                                                                       ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                        TITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                  433 TACCCTGGGTCTCGAGGAGGCCCTCCTAAGGACAACATCTCTTCAGTGTTCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                            GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                              TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGGTGCCCCTAACCTCTGGTGATGCCCCTGCTGCCGCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGGTGCCCCTACAATTAGTACTGGCCCCACCAGGAAAGTACACAGATGAATCAGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGA 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          =
=
=
=
=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1033
                                                                                                                                                               253
                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                      553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1141
                                                                                                              193
                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      196
             73
                                    121
                                                                                     181
                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                            셤
                                                                                                         셤
                                                                                                                                                          셤
                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
             g
                                    ò
                                                                                     ò
                                                                                                                                      ð
                                                                                                                                                                                      à
                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ö

9

9

us-10-004-219b-3.rge

241 ANTGATTGAMANACAGGAACTCAACTGAAACCTGCACCTCGCAATTGGAGGTGGAAC 241 ANTGGTTGAAACACACAACACAACTGAAACCTGAAACCTCGCAATTGGAGGTGGAAC 301 TTTGGAACTGGTCCTTTCACTCACTCACTCACACTCGACACTCGAACATTGTTTTTTTT	Chordata;	REFERENCE 1 (bases 1 to 1209) AUTHORS Webb,D.C., McKenzie,A.N. and Foster,P.S. TITLE Expression of the YM2 lectin-binding protein is dependent on			REFERENCE: 2 (Dases I to 1209) ANTHORS Webb,D.C. and Foster,P.S. TITLE Direct Submission JOURNAL Submitted (02-AUG-2001) Biochemistry and Molecular Biology, John	RS	н	REMARK Sequence update by submitter COMMENT on Aug 6, 2002 this sequence version replaced g1:15705156. FEATURES 11209		CDS 11209 /note="expression regulated by IL-4 and IL-13 signaling via the IL-4R alpha subunit" /codon_start=1	/product="secreted protein precursor Ym2" /protein_id="AAL03953.2" /db_xref="G1:2213907" /translation="MAKLILVTGIAILLNVQLGSSYQLMCYYTSWAKDRPTBGSFKPG	NIDPCLCTHLIYAFAGMKNNEITYLSEQDLRDYAALNGLKDRWTELKTLLAIGGKKFG PAPFSAWVGPRONRQTFIKSVIRFLRGYNDGLNLDWQYPGSRGSPRKDKHLFSVLVQ EMRKAFEBESTLHHIPPKLLITSTGAGFIDVIKSGYKIPELSQSLDYIQWYYDLHDPK NGYTGENSPLYKSPYDIGKSADLNVDSIITYWKDHGAASEKLIVGFPAYGHTFILSDP	SKNOIGDPTVSAGPEKYTNEGGLLA GYDNVRSFKLKAOMLKDNNLGGAVVR SCRAASYRGEL" sig_peptide 163	BASE COUNT 326 a 273 c 282 g 328 t ORIGIN Query Match 46.4%; Score 708.2; DB 10; Length 1209;	Similarity 74.6%; 0; Conservative C ATGGCCAAGCTACTTCTCGT	н	Qy 61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC 120	121 TTCAAGCCTGATAACCCCTGCCTGTGTACCTCACCTGTTTATCTGGG 121 TTCAAACCTGGTAATATCACCCTGCTGTGTACTCACCTGATCTTTGTTGTGGG 121 TTCAAACTGGTAATATCACCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
211 AATGACTTGANAAACAGGAACACAGAAACTGANAACCTCTGGCAATTGGAGGGTGGAACACACACACACACAC	.				· <u></u>		-								•			
	AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC	AATGGTCTGAAAGACAGAACACTGAGCTAAAAACTCTCCTGGCCATTGGAGGATGGAAG TTTGGAACTGCTCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT	TTGGACCTGCCTCGTTCAGTGCCTTCTTACTCCTCAGAACCGTCAGATATTCATT	ACCTCAGTCATCAAAȚITCTGGGTCAGTATGGGTTTGATGGACTGGACCTGGGAA	TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGAGAGGTITITITITITITITITITITITITITITITI	GAAATGCGTGAAGCTTTGAGCAGGAGGTATTGAGAGCAACAGGCCCAGACTGATGGTT 	ACTGCTGTAGCTGGTGGGATTTCCAACATCCAGGCTGGCT	TCTAAGTACCTGGATTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC	TACACTIGGGAGAAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC	CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC	ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA	ATTGGTGCCCTACCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTC	TGGGCCTACTATGAGCTTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC	TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG	AGCTICAGIGITAAAGCICAGIGGCITAAGCAGAACAATITIGGAGGIGCCATGAICTGG	GCCATTGACCTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT	CCCCTGGACATGGACTTCAGTGGTTCTTTCTGTCACCAGAGACATTCCCTCTGACACACAC	

ö GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC 120 TTCAAGCCTGATGACATTAACCCCTGCGTGTACTCACCTGATCTATGCCTTTGCTGGG 180 121 TTCAAACCTGGTAATATTGACCCCTGCTGTACTCACCTGATCTATGCCTTTGCTGGG 180 181 ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC 240 241 AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC 300 9 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT Gaps ; Length 1209; Indels Score 708.2; DB 10; Pred. No. 3.6e-209; 0; Mismatches 303; 328 t 282 g 46.48; 74.68; 1. .63 273 c Conservative imilarity .ide 326 , ద ò g ò

AY049765 AY049765 1221233906 TRNA Tinear ROD 06-AUG-2002 Mus musculus secreted protein precursor Ym2 mRNA, complete cds. AY049765.2 GI:22123906

DEFINITION ACCESSION VERSION KEYWORDS

RESULT 11 AY049765 LOCUS

```
/product="putative secretory protein precursor"
/product="qutative secretory protein precursor"
/db_xref="d1:10006514"
/db_xref="d1:10006514"
/translation="makLilvyglessyolmcyytswakdrpfegsfkpg
/translation="makLilvyglessyolmcygressyolmcyytswakdrpfegsfkpg
nidpcl.cthlyarpagwriksylretracylretracylretracylre
nidpcl.cthlyarpagwriksylretracylretracylressylvg
emrkarpesseriumiprellifstagaeinvygriksgykrpelsogsldyroundyr
NGYTGENSPLYKSPYDIGKSADLNYDSIITYWKDHAAASEKLIVGFPAYGHTFILSDP
SKNGIGDPTVSAGPPGKYTNEGGLAVYFEICTFLNEGATEIPDATQEVPYAYLGNEWV
SYDNYRSFKIKAQWAKDNNLGGAVVWPLDMDDFSGSFCHQGRFPLTTTLKRDLNVHSA
SCRASYRGEL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGGTCTGAAAGACAGGAACTGTAAAAACTCTCCTGGCCATTGGAGGATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunology,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTCAGTTATCAGATTCCTTCGTCAATATAACTTTGATGGCCTCAACCTGGACTGGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Argeccaagerearrereacagereregeaarrereaargracageregearer
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                      Direct Submission
Submitted (05-DEC-2001) Institute of Microbiology & Immus
National Yang-Ming University, #155 Sec. 2 Li-Nong St., 1
Taipei 112, raiwan
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                               ch 46.3%; Score 706.6; DB 10; Il Similarity 74.5%; Pred. No. 1.1e-208; 889; Conservative '0; Mismatches 304;
                                            Protein
                                                                                                                              Location/Qualifiers
1.1209
/organism="Mus musculus"
/strain="BALB/c"
/db_xref="taxon:10090"
/clone="pggmr-ez-ym2.s"
/tissue_type="stomach"
1.1209
                                                                                                                                                                                                                                                                                                                                                                                                 327
                                            Ym2
                                            ōŧ
                                                                                                                                                                                                                                                                                                                                                                                                  5
                                            Tissue-specific Expression
                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                             /codon_start-1
                                                                                                                                                                                                                         /gene="Ym2"
1. .1209
                      (bases 1 to 1209)
                                                                                                                                                                                                                                                /gene="Ym2"
                                                                 to 1209)
                                                                                                                                                                                                                                                                                                                                                                                                  Ü
                               Chang, N. -C.A.
                                                                 2 (bases 1
Chang, N.-C.P
                                                        Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                  326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                   Match
                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                      REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                   gene
                                                                            AUTHORS
                                                                                                   JOURNAL
                                                                                                                                                                                                                                      CDS
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROD 22-MAY-2002
(Ym2) mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG 1020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                      420
                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                     840
                                            360
                                                                  420
                                                                                                             480
                                                                                                                                   480
                                                                                                                                                         540
                                                                                                                                                                                540
                                                                                                                                                                                                      9
                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                  999
                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                              TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC 720
                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                               780
AATGGTCTGAAAGACAGGAACACTGAGCTAAAAACTCTCCTGGCCATTGGAGGATGGAAG 300
                                                                                                                                                                                                                                                                                                                                                                                                 GCCATTGACCTTGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCTGGACATGGATGATTCTTTTCTGTCACCAGGGACGTTTCCCTTGACA
                                                                            ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                             TACCCAGGCTCACGTGGGAGCCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                          GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                     TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                              CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                     ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1209 bp mRNA putative secretory protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:18086513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus p
complete cds.
AY065557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AY065557
                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081
                301
                                                                                      361
                                                                                                                                   421
                                                                                                                                                         481
                                                                                                                                                                                481
                                                                                                                                                                                                     541
                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1081
                                           301
                                                                  361
                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
AY065557
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                            oy
op
                                                                                                                                                ŏ
                                                                                                                                                                         g
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                              P Q
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
셤
                     ò
                                          a
                                                                ò
                                                                                  a
```

us-10-004-219b-3.rge

```
Sugano, S. and Suzuki, Y.

Direct Submission

Submitted (08-JUL-2002) Sumio Sugano, Institute of Medical Science,
Submitted (08-JUL-2002) Sumio Sugano, Institute of Medical Science,
University of Tokyo, Laboratory of Genome Structure, Human Genome
Center; Shirokane-dai, 4-6-1, Minato-ku, Tokyo 108-8639, Japan
(E-mail:cdnal@ims.u-tokyo.ac.jp, Tel:81-3-5449-5286,
NEDO human cDNA sequencing project supported by Ministry of
Economy, Trade and Industry of Japan; cDNA full insert sequencing:
Research Association for Biotechnology (RAB); cDNA library
Construction and 5'-end one pass sequencing: Institute of Medical
Science, University of Tokyo, Laboratory of Genome Structure, Human
Genome Center; 3'-end one pass sequencing: RAB; clone selection for
full insert sequencing: RAB and Helix Research Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGC 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCATGGCTCCTGGGAGGCTACACTGGGGAGAATACTCTTTACAAATACCCTACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  881 ATACCAGACAGGCTGGGTTCTGGGCCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TIGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGACATATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 4250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :: pME18SFL3"
1154 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; DB 9; L
7.8e-197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches 175;
                                                                                                                                                                                                                                                                                                             full insert sequencing: RAB and Helix Resiliant Section/Qualifiers

1 .4250
| /organism="Homo sapiens" | /organism="Examol200" | /clone="SrW04207" | /tissue_type="stomach mucosa" | /clone="Lib="STM" | /clone="Lib="STM" | /clone="Lib="STM" | /clone="cloning vector: pwe185Fb3 | /clone="clone" pwe185Fb3 | /clon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 669;
Pred. No. 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.9%;
ilarity 81.2%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 793; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIĞIN
    REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . දු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens CDNA FLJ25948 fis, clone STM04207, highly similar to Homo sapiens acidic mammalian chitinase precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT 1140
                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                    099
                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                                                                                                                                            780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTGTTGGATTCCCAGAGTATGGACACCCTTCATCCTGAGAAACCCCTCTGATAATGGA 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTC 900
                                                                                                                                                          ACTICCACAGGAGCIGGATICATIGACGIAATCAAGICIGGGIACAAGAICCCIGAACIG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Abe, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                         TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                               TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                     CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                             GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                   TCTCAGTCTCCACTATATTCAGGTCATGACATATGATCTCCATGATCCTAAGAATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGA 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ninomiya,K., Wagatsuma,M., Kanda,K., Kondo,H., Yokoi,T.,
Kodaira,H., Furuya,T., Takahashi,M., Kikkawa,E., Omura,Y., A
Kamihara,K., Katsuta,N., Sato,K., Tanikawa,M., Yamazaki,M.,
Suzuki,Y., Hata,H., Nakagawa,K., Mizuno,S., Morinaga,M.,
Kawamura,M., Sudiyama,T., Liie,R., Otsuki,T., Sato,H.,
Nishikawa,T., Sugiyama,A., Kawakami,B., Nagai,K., Isogai,T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AK098814.1 GI:21758941
oligo capping; fis (full insert sequence).
Homo sapiens stomach mucosa cDNA to mRNA, clone_lib:STM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NEDO human cDNA sequencing project
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone:STM04207.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sugano, S.
NEDO human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1141
                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1081
                             481
                                                                     481
                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                  721
                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
AK098814
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                           ò
                                                                     8
                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                ò
                                                                                                                                                 g
                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                         ò
```

3243

580

ä

3303

3363

640

700

3483

820

760

3603

940

880

ï

us-10-004-219b-3.rg

```
994 bp mRNA linear ROD 30-MAY-1996
Mus musculus chitinase-related protein MCRP mRNA, partial cds.
U56900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGT 1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCGAGCCAGTGACTACTCCTCC ----AGGAAGTGGGGAGTGGGGGTGGAAGCTCC 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTG 1311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                             206
                                                                                        600
                                                                                                                  266
                                                                                                                                          9
                                                                                                                                                                                             720
                                                                                                                                                                                                                      386
                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                       446
                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                        506
                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                          566
                                                                                                                                                                                                                                                                                                                                                                                                     960
                                                                                                                                                                                                                                                                                                                                                                                                                             626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        867 ATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCT 926
                                                                                                                                                                   326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rccaccergaagaaggccerrgcergcagagrgcaagrrgcaggrccagercagccc 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAGCAGGCTTGTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAA 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                         TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCAGGAAGTGCCTTATGCCTATCAGGCAATGTGTGGGTTGGCTATGACAAGGTCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTICAGIGITAAGGCTCAGIGGCTTAAGCAGAACAATTTIGGAGGIGCCAIGAICIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGCCGCCTATACCAGACAGGCTGGGTTC
                                                                                                                                            TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                      GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
              Gaps
             6
              Indels
 Pred. No. 1.1e-195;
); Mismatches 165;
            .,
ilarity 81.8%;
Conservative
 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1047
                                     481
                                                               147
                                                                                        541
                                                                                                                   207
                                                                                                                                          601
                                                                                                                                                                   267
                                                                                                                                                                                             199
                                                                                                                                                                                                                      327
                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                       387
                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                        447
                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                          507
                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                             267
                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             987
 Best Local
Matches 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
MMU56900
LOCUS
                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                      ò
                                                         g
                                                                                     δ
                                                                                                            유
                                                                                                                                          ò
                                                                                                                                                              셤
                                                                                                                                                                                           à
                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                ŏ
                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MREAFEQBEAKQINKPRLMVTAAVAAGISNIQSGYEIPQLSQYLD
YIHVMTYDLHGSWEGYTGENSPLYKYPTDTGSNAYLNVDYWNNYWKDNGAPAEKLIVG
FPTYGHNEILSNPSNTGIGAPTSGAGPAGPYAKESGIWAYYEICTFLKNGATOGWDAP
QEVPYAYOGNWWYGYDNYKSDIKADMLKHNKFGGAMVWAIDLDDFTGTFCNGKFPL
ISTIKKAALGIQSASCTAPAOPIEPTATAAPSGSGNGSGSSSGGSGGGGGGGRGNG
YPVANNRNAFWHCVNGYTYQQNCQAGLVFDTSCDCCNWA"
337 c 309 9 262 t
                                                               1231
                                                                                       3963
                                                                                                                            3964 GGAGCGGGAGTAGCAGCTCTGGAGGCAGCTCGGGAGGCAGTGGATTCTGTGCTGTCAGAG 4023
                                                                                                                                                                               PRI 25-NOV-1999
                                                                                                               1232 GGAGTGGGGGTGGAAGCTCCGGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAG :1291
                                                                                                                                                                  CAGATGGCCTCTACCCTGTGGCAGATGACAGAATGCTTTTTGGCAGTGCATCAATGGAA 1351
                                                                                                                                                                                                                     Direct Submission
Submitted (16-MAR-1999) Akihiko Saito, Otsuka Pharmaceutical Co.,
Ltd., Otsuka GEN Research Institute; 463-10 Kagasuno Kawauchi-cho,
Tokushima, Tokushima 771-0192, Japan (E-mail:saito@otsuka.gr.jp,
Tel:81-88-665-2888, Fax:81-88-637-1035)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                             AB025009 1188 bp mRNA linear PRI 25-NOV-19
Homo sapiens TSA1902-S mRNA for novel member of chitinase family,
Complete cds.
AB025009
                                                                           AGGGAAAATTTCCTCTGACTTCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTT
                                    AGGGCAAGTITCCCCTAATCTCCACCCTGAAGAGGCCCTCGGCCTGCAGAGTT
                                                             GCACAGCTCCTGACGTGCCTTCCGAGCCAGTGACTACTCCTCC-----AGGAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
(bases 1 to 1188)
Salto, A., Ozaki, K., Fujiwara, T., Takahashi, E. and Tanigami, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saito,A., Ozaki,K., Fujiwara,T., Nakamura,Y. and Tanigami,A. Isolation and mapping of a human lung-specific gene, TSA1902, encoding a novel chitinase family member 239 (2), 325-331 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Length 1188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1 /
/product="novel member of chitinase family"
/protein_id="BAA86981.1"
/db_xref="01:6461199"
                                                                                                                                                                                                                                                                                                                                                                                                                            family; TSA1902-S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
1. .1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="TSA1902-S"
150. .1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        150. .1097
/gene="TSA1902-S"
                                                                                                                                                                                                                                                                                                                                                                                                             AB025009.1 GI:6467178 novel member of chitinase Homo sapiens cDNA to mRNA.
                                                                                                                                                                                                                                                                    43.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                            1181
                                                                                     3904
                                                                                                                                                                  1292
                                                                                                                                                                                          4024
                                                                                                                                                                                                                    1352
                                                                                                                                                                                                                                                                     1412
                                                                                                                                                                                                                                                                                               4144
            1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                  RESULT 14
AB025009
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                 g
                                                                                οg
                                                                                                               à
                                                                                                                                       g
                                                                                                                                                                                       a
                                                                                                                                                                                                                                      쉱
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                             셤
                                                            ò
                                                                                                                                                              õ
                                                                                                                                                                                                              ò
            ç
```

```
Search completed: July
Job time: 4013.96 secs
                                                                            g
                                                                                                                                                     a
                                                                                                                                                                                                                                a
                                           à
                                                                                                                  ò
                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                       d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGAGIIDVĮKSGYKIPELSQSLDYIQVMTYDLHDPKDGYTGENSPLYKSPYDIGKSAD
ILANDSIISYWADHGAASEKLIVGFPAYGHTFILSDPSKTGIGAPTISTGPPGKYTDES
GLLAYYEVÇTFLNEGATEVWDAPQEVPYAYGGNEWYGYDNVRSFKLKAQWLKDNNLGG
AVWNPLDMDPFSGSTCHORHPPLTSTLKGDLNIHSASCKGFY"

218 ¢
230 g
267 t
1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="WQYPGSRGSPPKDKHLFSVLVKEMRKAFEEESVEKDIPRLLLTS
                                                                                                                                                                                                                              Direct Submission
Submitted (27-APR-1996) Sergey V. Shmelkov, Molecular Basis of
Differentiation and Development, Engelhardt Institute of Molecular
Biology, Vavilov 32, Moscow 117984, Russia
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGCTCATIGIGGGATTTCCAGCATATGGGCATACCTTTATCCTGAGTGACCCTTCTAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTACTCACTTCCACAGGAGCAGGAATCATTGACGTAATCAAGTCTGGCTACAAGATCCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGAACTGTCTCAGTCTTTGACTATATTCAGGTCATGACATATGATCTCCATGATCCTAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGCTCATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGA 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGGTGGCGCCTATACCAGACAGGC 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           894 TGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTG 953
                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                414 CTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTGAAGGAAATGCGTAAAGCTTTTGAGGAAGAATCTGTGGAGAAAGACATTCCAAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGGGCTACACTGGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                       cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                   Shmelkov,S.V., Zinovjeva,M.V. and Belyavsky,A.V.
Mouse chitinase-related protein mRNA (MCRP), partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 994;
                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=2
/product="chitinase-related protein MCRP"
/protein_id="AAB01230.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30.2%; Score 460; DB 10; 74.4%; Pred. No. 1.1e-131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="bone marrow"
                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="GI:1336166
                                           mouse strain-CBA
                                                                                                                                                                                                                                                                                                                                                                  /strain="CBA
     U56900.1 GI:1336165
                                                                                                                                                                                            (bases 1 to 994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                          .994
                                                                                                                                                                                                            Shmelkov, S.V.
                                                             musculus
                                                                                                                                                                       Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
Matches 58
                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
ORIGIN
                                                           ORGANISM
                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                         FEATURES
```

셤 à 셤 g

ò

g

δý

g ò g ò 8

8 ò

ò

```
1013
                                                                1073
                                                                                                             1133
                                                                                                                                                          1193
                                                                                       999
                                                                                                                                                                              780
1134 TCTGACTTCTACTTTGAACAAAGCCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGA
                                                                                                                                                                    1014 TATCAAGAGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCAT
                                                                                                             1074 GATCTGGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAATTTCC
```

3, 2003, 07:21:40

Human chitinase cD Human chitchriosid Human chitinase cl Mo-13B clone of hu Human chitinase cD Human chitinase cD Human chitchiase cd Human chitchiase dd

Hamster oviduct sp DNA encoding novel Human digestive sy DNA encoding a hum

Human cartilage gp Bovine ovidect spe Human cartilage gl DNA encoding a hum Human cartilage gp DNA encoding a hum CDNA sequence #402 YKL-40 gene. Homo Human cancer marke Bovine whey protei

Scoring table:

Searched:

Perfect score:

ö

Sequence:

```
Disease treatment; infection; chronic occlusive pulmonary disease; bronchial asthma; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disease treatment related oligonucleotide SEQ ID NO: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                             ABL03596
AAH23078
AAN81756
                                                                                                                                                                                                                                                                                                           AAC00233
ABN76932
                      AAV10436
                                                                                                                                                                                AAV13926
                                                                                                                                                                                                                                                                                                 ABL03557
                                                                                                                                                                                                                                                                                                                                  ABL29841
                                                                                                                                                                                                                                                                                                                                             ABL19747
                                                                                                                                                                                               AAV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH42025 standard; DNA; 1678 BP.
  17368
WO200136633-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAY-2001.
                                                                                                                                                                                                                                            307.4
296.6
264.4
259.8
210
176.2
152.6
                                                                                                                                                                                                                                                                                                                                                                 139.8
137.8
136
132.6
                                                                                          350.8
345.2
344.8
3343.2
3343.2
339.4
339.6
339.6
339.8
330.8
3314.8
314.8
314.8
                                                                                                                                                                                                                                                                                                                                  146
142.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAH42025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 1
AAH42025
 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (without alignments)
9825.200 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                            (SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseq/geneseqn_embl/NA1990_DAT:*
(SIDS2/goddata/geneseq/geneseqn_embl/NA1991_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1992_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1993_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1995_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1995_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1995_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA1999_DAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_DAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_DAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_BAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_BAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_BAT:*
(SIDS2/goddata/geneseqn_embl/NA2001_BAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                         US-10-004-219B-3
1525
1 atggccaagctacttctcgt......taaaattggtagccaaaaca 1525
                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseqgn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseqgn-embl/NA1982.DAT:*
/SIDS2/gcgdata/geneseqgn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseqgn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*
                                                                             2, 2003, 22:31:11 ; Search time 349.54 Seconds
           GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                         fotal number of hits satisfying chosen parameters:
                                                                                                                                                                                                      2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries
                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                    IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                 N_Geneseq_101002:*
                                                                                                                                                                                                                                                Minimum DB seq length: 0
Maximum DB seq length: 200000000
```

Database

Human secreted pro Human glycoprotein

Drosophila melanog Drosophila melanog Manduca sexta larv

Drosophila melanog

Osteoarthritis tis Gene encoding poly Drosophila melanog

Drosophila melanog

Human secreted exp Disease treatment Drosophila melanog Drosophila melanog

New proteins, peptides and DNA for treatment of bronchial asthma, chronic occlusive lung disease and infectious disease

14-NOV-2000; 2000WO-JP08015

99JP-0324467

15-NOV-1999;

(TAKE) TAKEDA CHEM IND LTD

Nakanishi A, Morita S; WPI; 2001-397791/42.

Disease treatment Novel human coding Disease treatment Human chitinase cl MO-218 clone of hu Human chitinase cD Human chitinase cD

AAH42013 ABN59993 AAH42023 AAV10435 AAZ21847 AAD03759 ABL57380

1369 1636 1636 1636 1636 1636

1042.6 999.2 854 714.6 426.8 426.8 426.8

Disease treatment

Description

DB

Length

Query

è. Result

ò g g

ò

g

ò

a

ò

g

ογ

g à g ö g

ŏ 셤 ö q

g ò

8 6 à 8 ò a à

ò

```
1402
                                                                                         1162
                                                                                                                                                                    1140
                                                                                                                                                                                                                        1200
                                                                                                                                                                                                                                                1342
                                                                                                                                                                                                                                                                                                                                                     1462
                                                                                                                                                                                  1223 GCCATTGATCTGGATGACTTCACTGGCACCTTTCTGCAACCAGGGCAAGTTTCCCCTAATC 1282
                                                                                                                                                                                                                                                                          1201 TCCGAGCCAGTGACTACTCCTCC -----AGGAAGTGGGAGTGGGGGTGGAAGCTCC 1251
                                                                                                                                                                                                                                                                                                                                                                               1371
                                                                                                                                                                                                                                                                                                                                                                                           1463 GCAAATAACAGAAATGCCTTCTGGCACTGCGTGAATGGAGTCACGTACCAGCAGAACTGC 1522
                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTICAGIGITAAGGCICAGIGGCITAAGCAGAACAAITITGGAGGIGCCAIGAICIGG
                                                                                                                                            1163 AGCTTCGATATTAAGGCTCAATGGCTTAAGCACACAAATTTGGAGGCGCCATGGTCTGG
                                                                                                                                                                                                                                                                                                                             GGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTG
                                                                                                                                                                                                                                                                                                                                                                               GCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pe
              TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGGATGCC
                                                                TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAĠ
                                                                                                                                                                      GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT
                                                                                                                                                                                                                        TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT
                                                                                                                                                                                                                                                                                                  1343 ATTGAGCCAATAACTGCTGCTCCCAGTGGCAGCGGGAACGGGAGCGGGAGTAGCAGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            which can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             treatment of bronchial asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             infection; chronic occlusive pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention provides the sequence of a protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New proteins, peptides and DNA for treatment of bronch chronic occlusive lung disease and infectious disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disease treatment related oligonucleotide SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 5; Page 100; 114pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH42013 standard; DNA; 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99JP-0324467.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-JP08015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Morita S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bronchial asthma; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-397791/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200136633-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nakanishi A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAY-2001
                                                                                                                                                                                                                                                                                                                             1252
                                                                                                                    1021
                                                                                                                                                                                                                                                                                                                                                                               1312
              901
                                                                961
                                                                                                                                                                      1081
                                                                                                                                                                                                                        1141
                                                                                                                                                                                                                                                                                                                                                     1403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAH42013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 2
AAH42013
                                                                                      g
                                                                                                                                           g
                                                                                                                                                                                          g
                                                                                                                                                                                                                                                q
                                     ద
                                                               ò
                                                                                                                  à
                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                          202
                                                                                                                                                                                                                                                              262
                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGCTGCAGTAGCTGCTGGCATCTCCAATATCCAGTCTGGCTATGAGATCCCCCAACTG 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                        The present invention provides the sequence of a protein which can be used in the treatment and prevention of infectious diseases. Inhibitors of the protein can be used to treat bronchial asthma and chronic occlusive pulmonary disease. The present sequence is an oligonucleotide described in the exemplification of the invention.
                                                                                                                                                                                               GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                     TTCAAGCCTGATGACÀTTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                AGGCAGAACAACGAGATCACCACCATCGAATGGAATGATGTGACTCTCTACCAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                          AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                       TITGGAACTGCTCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                          Gaps
                                                                                                                               Length 1678;
                                                                                                                                                        6
                                                                                                                                                        229; Indels
                                                                                                     Sequence 1678 BP; 397 A; 497 C; 418 G; 366 T; 0 other;
                                                                                                                               DB 22;
                                                                                                                             Score 1042.6; DB 2;
Pred. No. 5.4e-307;
0; Mismatches 229;
Example 5; Page 107-108; | 114pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                     ΞΞ
                                                                                                                             68.48;
83.48;
                                                                                                                                                        Conservative
                                                                                                                                           Best_Local Similarity
Matches 1199; Conserv
                                                                                                                                                                                  <del>,</del>
                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                  383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                               Query Match
                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        983
```

ന

960

1203

1254 1200

Sun

ò g

à

g

ö

g ö OD à

õ

ŏ g õ ç

ò

ò 임 õ

```
GGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCA 1314
                                                                                                                                                                                                                GATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAA 1374
                                                                                                                                                                                                                                                                                                                                                                                                   Human; antianaemic; vulnerary; antlinflammatory; immunomodulator;
antlinfertility; cerebroprotective; cytostatic; rheumatic; gene therapy;
neuroprotective; antiparkinsonian; protein therapy; EST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                444
tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences of 444 novel human proteins. These were isolated from expressed sequences tags (ESTs). They can be used to stimulate cell growth, to regulate haematopolesis e.g. to treat aplastic anaemia, to help tissue regrowth
                                                                                                         CAGGAAGTGCCTTATGCCTATCAGGGCAATGTGGGGTTGGCTATGACAACATCAAGAGC
                                                                                                ACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGGTCCTGACGTGCCTTCC
                                                                                                                                     GAGCCAGTGACTACTCCTCC-----AGGAAGTGGGGAGTGGGGGTGGAAGCTCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ë
                                                                                                                                                                                                                                                     Ren
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               An isolated polynucleotide for treating diseases associate encoded polypeptide such as cancer and multiple sclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang
RT;
                                                                                                                                                                                                                                                                                                                                                                                 Novel human coding sequence SEQ ID NO: 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Asundi V,
T, Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                expressed sequence tag; gene; ss
                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 404; 509pp;
                                                                                                                                                                                                                                                                                                                         ABN59993 standard; cDNA; 1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C, Zhou P, Ası
Yang Y, Wehrman T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-SEP-2001; 2001WO-US26015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-SEP-2000; 2000US-0659671
                                                                                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                               (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-292408/33.
P-PSDB; ABB97580.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO200222660-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                              28-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-MAR-2002
                                      961
                                                         1084
                                                                            1021
                                                                                                1144
                                                                                                                  1081
                                                                                                                                     1204
                                                                                                                                                       1141
                                                                                                                                                                          1255
                                                                                                                                                                                              1201
                                                                                                                                                                                                                 1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rang YT,
                    1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1;
                                                                                                                                                                                                                                                                                                                                           ABN59993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kue AJ,
                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                               g
                                                                                                                                                   a
                                                                                                                                                                                      셤
                                                                                                                                                                                                               à
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                     ద
              ò
                                   8 A
                                                                         g
                                                                                             ò
                                                                                                                                    õ
                                                                                                                                                                         οχ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGC 1023
                                                                                , ii
                                                                                                         123
                                                                                                                                              183
                                                                                                                                                                 120
                                                                                                                                                                                    243
                                                                                                                                                                                                      180
                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                          483
                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                             663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              900
                                                                                                                             9
used in the treatment and prevention of infectious diseases. Inhibitors of the protein can be used to treat bronchial asthma and chronic occlusive pulmonary disease. The present sequence is an oligonucleotide described in the examplification of the invention.
                                                                                                                                                                                 GCTGCAGTAGCTGCCTCCCAATATCCAGTCTGGCTATGAGATCCCCCAACTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTC
                                                                                                                                              AAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTTGCTGGGATG
                                                                                                                                                                                                                                                                                                                                          AATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAGGTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGCCCCTACCTCTGGTGATGCCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTACTATGAGATTTGCACCTTTCTGAGAGTGGAGCCACTGAGGTCTGGGATGCCTCC
                                                                                                                                                                                                                                                                                                     TCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGGACTGGGAATAC
                                                                                                                                                                                                                                                                                                                                                                                ATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTC
                                                                                                                                                                                                                                                               GGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACC
                                                                                        Gaps
                                                                   DB 22; Length 1368;
                                                                                      6
                                                                                      Indels
                                               Sequence 1368 BP; 324 A; 398 C; 349 G; 297 T; 0 other;
                                                                  Score 999.2; DB 22;
Pred. No. 8.3e-294;
O; Mismatches 213;
                                                                  Query Match 65.5%;
Best Local Similarity 83.8%;
Matches 1146; Conservative
                                                                                                         64
                                                                                                                                              124
                                                                                                                                                                61
                                                                                                                                                                                                     121
                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      781
                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                   364
                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          904
                                                                                                                                                                                  184
                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                              304
                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                               484
                                                                                                                                                                                                                                                                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                964
 8
                                                                                                                       g
                                                                                                                                                                                 oy
ob
                                                                                                                                                                                                                                                                                                                                                        요
                                                                                                                                                                                                                                                                                                                                                                                                                                    q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
```

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTC 1135
                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                                                                                                                                                      655
                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                          TGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGA 535
                                                                                                                                                                                                                                                                                                                                                                                  364
                                                                                                                                                                                                                                                                                                                                                                                                        595
                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGCTACACTGGGGGGAAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATG 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGAATTGGTGCCCCCACCTCTGGTGCTGCTGCTGGCCCTATGCCAAGGAGTCTG 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  844
                                                                                                                                                                                        CTTATACTGAATTTGCAGCTCGGAACAGCCAGCTGAAACTCTCCTGGCCATTGGAGGCT 124
e.g. in burn treatment, to regulate the immune system e.g. to treat multiple sclerosis, to regulate activin or inhibin e.g. to treat infertility, to regulate haemostasis or thrombolysis e.g. to treat stroke and cancer, to screen for drugs, to treat inflammatory conditions e.g. rheumatoid arthritis, and to treat nervous system disorders e.g. Parkinson's disease. The present sequence is a coding sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCT
                                                                                                                                                                                                                             AGCTCATTGTTGGATTCCCCAGAGTATGGACACCCTTCATCCTGAGAAACCCCTCTGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCT
                                                                                                                                                                                                                                                             TCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACT
                                                                                                                                                                                                                                                                                                                                                                                TGCAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCCAAGCAGATCAACAAGCCCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                       AACTITCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCATCGTTGGATTCCCTACCTATGGACACACTTCATCCTGAGCAACCCTCCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAAGAGCTTCAGTGTTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGA
                                                                                                                                                                                                                                                                                                           GGGAATACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTTGCTGGCGCCTATACCAGACAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGG
                                                                                                                                             Gaps
                                                                                                                                          6
                                                                                                                                           Indels
                                                                                                                    Length
                                                                                            393 C; 341 G; 308 T; 0 other;
                                                                                                                   Score 854; DB 24;
Pred. No. 1.6e-249;
0; Mismatches 200;
                                                                                                                 56.0%;
nilarity 82.6%;
Conservative (
                                                                                           Sequence 1369 BP; 327 A;
                                                                                                                               al Similarity
993; Conserv
                                                                      Invention
                                                                                                                                                                                                                                                             356
                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1076
                                                                                                                   Query Match
                                                                                                                                                                  236
                                                                                                                                                                                        9
                                                                                                                                                                                                                                      125
                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                305
                                                                                                                                                                                                                                                                                                                                                                                                       536
                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                    969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         905
                                                                                                                                Local
                                                                                                                                          Matches
88888888888
                                                                                                                                                                  ò
                                                                                                                                                                                   g
                                                                                                                                                                                                       · Š
                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
```

```
1426
                                              1246
                                                                                               1306
                                                                                                                       1144
                                                                     1084
                                                                                                                                            TGACTICTACTITGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACG 1195
                                                                                                                                                                                                         The present invention provides the sequence of a protein which can be used in the treatment and prevention of infectious diseases. Inhibitors of the protein can be used to treat bronchial asthma and chronic occlusive pulmonary disease. The present sequence is an oligonucleotide described in the exemplification of the invention.
                                                           TAATCTCCACCCTGAAGAAGGCCCTCGGCCTGCAGAGTGCAAGTTGCACGCTCCAGCTC
                                                TGCCTTCCGAGCCAGTGACTCCTCC-----AGGAAGTGGGAGTGGGGGTGGAA
                                                                                               GCTCCGGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACC
                                                                                                                                                                                              ATTGTCAAGCAGGCCTTGTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                             infection; chronic occlusive pulmonary disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             asthma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; DB 22; Length 1469; .4e-207;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment of bronchial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1469 BP; 406 A; 331 C; 332 G; 400 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New proteins, peptides and DNA for treatment of bronch chronic occlusive lung disease and infectious disease
                                                                                                                                                                                                                                                                                                                                                                                                      ë
                                                                                                                                                                                                                                                                                                                                                                                                      Disease treatment related oligonucleotide SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.9%; Score 714.6; DB 22; 74.9%; Pred. No. 5.4e-207; tive 0; Mismatches 299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 106; 114pp; Japanese.
                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                               AAH42023 standard; DNA; 1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-NOV-2000; 2000WO-JP08015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99JP-0324467
                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 46.9
Best Local Similarity 74.9
Matches 894; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TAKE ) TAKEDA CHEM IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                               Disease treatment; in
bronchial asthma; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Morita
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-397791/42.
                                                                                                                                                                                                                                             1427 AA 1428
                                                                                                                                                                                                                                                                     GA 1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200136633-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakanishi A,
                                                                                                                                                                                                                                                                                                                                                                              24-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAY-2001
1136
                        965
                                                1196
                                                                     1025
                                                                                               1247
                                                                                                                                                                                              1367
                                                                                                                                                                                                                                                                    1265
                                                                                                                                                                                                                                                                                                                                                        AAH42023;
                                                                                                                                                                                                                                                                                                                                                                                                                             Disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp
                                                                                                                                                                                                                                                                                                         RESULT 4
                     용
                                              à
                                                                g
                                                                                               ö
                                                                                                                    셤
                                                                                                                                               à
                                                                                                                                                                  셤
                                                                                                                                                                                             ò
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                  g
```

ö

Gaps

Indels

9

ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT

S

```
1089 CCCCTGGACATGGATGACTTCAGTGGTTCTTTCTGTCACCAGAGACATTTCCCTCTGACA 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence encodes a novel human chitinase isolated from clone MO-218. Chitinases are useful for treating or preventing fungal infection and as immunogens for generating antibodies which are used to purify, detect and quantify chitinases, e.g. for diagnosis of Gaucher's disease. The nucleic acid sequence of the chitinase is also useful as a probe to identify and isolate genomic DNA encoding chitinases or similar proteins, or cells expressing them or to generate transgenic ('knockout') rodents. It can also be used in hybridisation assays and to detect genetic alterations in the chitinase gene related to disease. Agents that inhibit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     this protein may be useful in treatment of Gaucher's disease and rheumatoid arthritis, where overexpression of the protein can damage the extracellular matrix. Chitinase also improves the activity of other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agents and may allow a reduction in the dose of such agents,
                                                                                                                                                                                                              Chitinase, human, fungal infection, immunogen, diagnosis, treatment, Gaucher's disease, transgenic, detection, hybridisation, antifungal, rheumatoid arthritis, overexpression; extracellular matrix; ss.
                        TCTACTTIGAACAAAGCCCTIGGCATATCCACTGAAGGTTGCACAGGTCCTGA
                                     Length 1636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic acids encoding human chitinase - useful as antifungal agents, especially in combination with other antifungals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1636 BP; 361 A; 491 C; 440 G; 344 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 426.8; DB 19;
Pred. No. 3.4e-119;
0; Mismatches 417;
                                                                                                                                                                                                                                                                                                                                                                                           /note= "from clone MO-218"
                                                                                                                                                                                                                                                                                       Location/Qualifiers
2..1402
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 3; Page 38-40; 63pp; English
                                                                                                                                                                                       Human chitinase clone MO-218 cDNA.
                                                                                                               BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and thus of their side effects.
                                                                                                               AAV10435 standard; cDNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.0%;
62.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-US10460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96US-0663618
                                                                                                                                                                                                                                                                                                                                                                     /product c
                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                               2..64
/*tag= b
65..1399
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 28.0
Best Local Similarity 62.1
Matches 693; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-052316/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P-PSDB; AAW40259
                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                     WO9747752-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-JUN-1996;
                                                                                                                                                              15-JUN-1998
                                                                                                                                                                                                                                                                                                                                                         mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-1997
                                                                                                                                                                                                                                                                                                                                sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antifungal
                                                 1149
                        1141
                                                                                                                                     AAV10435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gray PW;
                                                                                                                                                                                                                                                                  Ношо
                                                                                     RESULT 5
AAV10435
                                                                                                               οχ
                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          968
                                                                                                   240
                                                                                                                                                               248
                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                 368
                                                                                                                                                                                                                                                                                       361 ACCTCAGTCATCAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGACTGGACTGGAA 420
                                                                                                                                                                                                                                                                                                                                                       548
                                                                                                                                                                                                                                                                                                                                                                                                                                              009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       788
                                    120
                                                 121 TICAAGCCIGAIGACATIAACCCCIGCCIGIGACCICACCIGAICIAIGCCTITGCIGG 180
                                                                                                                                                                                       241 AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC 300
                                                                                                                                                                                                                                                                                                                CAGTCAGTTATCAGATTCCTTCGTCAATATAACTTTTGATGGCCTCAACCTGGACTGGCAG 428
              89
                                                                                                                                                                                                                                                                                                                                                                                                            1081 GCCATTGACCTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT
                                                                                                                                      181 ATGCAGAACAATGAGATCACCACATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                        TITGGAACTGCTCCTITCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                          TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       849 ATTGGTGCCCCTACAATTAGTACTGGCCCACCAGGAAAGTACACAGATGAATCAGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCTACTATGAGATTGCACCTTTCTGAGAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         909 CTGGCTTACTATGAGGTTTGTACATTTCTGAATGAAGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCCAAGAAGTGCCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTTCAGTGTTAAGGCTCAGTGCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGCCGCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                     TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                     GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1021
                                    61
                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                  369
                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
             g
                                   õ
                                                            a
                                                                                  ò
                                                                                                        셤
                                                                                                                                     õ
                                                                                                                                                           g
                                                                                                                                                                                     ò
                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

ï

Gaps

```
1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACGTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                         262
                                                                                                                                         382
                                                                                                                                                                                                                                        383
                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                       384 GCAAATACAGCCTTGACCTTGACTGGGAGTACCCAGGAAGCCAGGGGAGCC 443
                                                                                                                                                                                                                                                                                                      502
                                                                                                                                                                                                                                                                                                                           503
                                                                                                                                                                                                                                                                                                                                                                     563
                                                                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                                                                                                                                                                                                                                                                                   TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA 742
                                                                                                                                                                                                                                                                                                                                               AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA 562
                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AIGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          977
                      83
             TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                             CCATAGAATGGAATGATGTTACTCTGTAAAGCTTTCAATGACTTGAAAAACAGGAACA
                                                                                                                                                                                                                 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                             GTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                    CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                  504 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                       TTTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
  CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                         GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCT-----GGAAGGGGCCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  978 TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAAACCAAGGTCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     743
                     24
                                                             84
                                                                                     143
                                                                                                                                                   204
                                                                                                                                                                         263
                                                                                                                                                                                                                 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1038
23
                                          83
                                                                                                                              203
                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                              503
                                                                                                                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                                                                                                                                  623
                                                                                                                                                                                                                                                                                                                                                                                                                                                      524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       924
                                                                                                        g
                                                                                                                                                g
                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                             셤
                     음
                                                            a
                                                                                    ò
                                                                                                                             οŽ
                                                                                                                                                                        ò
                                                                                                                                                                                           g
                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
```

```
This is the nucleotide sequence of an allelic form of the human chitinase enzyme, which is capable of degrading Chitin (a linear homo polymer of better 1,4 linked N-acetylglucosanine residues).

Chitinase fragments can be used to screen for proteins or other molecules that specifically bind to the chitin-binding domain of human chitinase or that modulate its activity. These compounds are useful for immunization, as well as for purifying chitinase, so well as for purifying chitinase. Polymucleotide fragments of detection and quantification of chitinase. Polymucleotide fragments of the invention are useful as a source of probes and primers, and to express the proteins recombinantly. The chitinase fragments, when conjugated to antifungal compounds, are used to creat animals, especially humans, infected with chitin-containing parasites such as fungi. Fungal infection treated include candidiasis, aspergillosis, coccidioidomycosis, histoplasmosis, paracoccidioidomycosis, and dermatophytoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fragments of human chitinase used to treat fungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chitin can be degraded by the enzyme chitinase. Use of whole chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein for treating infections, especially fungal infections, is problematic. In view of the increasing incidents of life-threatening fungal infection in e.g. immunocompromised individuals, there exists a need for identifying new compounds for treating fungal infection. The
                                                                                                                                                                                                                                       chitin; fungal infection; immunocompromised; AIDS; chemotherapy; organ transplant; parasite; chitin-binding; allele; vector; truncated protein; ds.
                                                                                                                                                                                                         MO-218 clone of human Chitinase, with noncoding 5'/3' regions.
                  1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                     Human_Chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page 55-57; 83pp; English.
                                                                                                                                                                                                                                                                                                                                    Cocation/Qualifiers
                                                                                                             BP
                                                                                                            AA221847 standard; DNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US05343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0039198
                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                  /product=
66..1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                      *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gray PW, Tjoelker LW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           infections in animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         chitin-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-551417/46.
P-PSDB; AAY42425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                409946390-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-MAR-1998;
                                                                                                                                                                           10-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                     sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
                                                                                                                                             AAZ21847;
                                                                         AAZ21847
ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel
                                                                                                                                                                                                                                                                                                                                      Key
                                                                                                                                           g
 ò
```

```
978 TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGGGCTTCAAAACCAAGGTCAGCT 1037
                                                   1038 ATCTGAAGCAGAAGGGACTGGGCGGGGCCATGGTCTGGGCACTTAGATGATGTTTG 1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to a chitinase immunoglobulin (Ig) fusion product, comprising a human chitinase fused to at least a portion of an immunoglobulin chain. The fusion product is useful for treating fungal infections (mycoses) such as candidiasis, aspergillosis, blastomycosis, coccidioidomycosis, paracoccidioidomycosis, histoplasmosis, mucormycosis, cryptococcosis, chromoblastcmycosis, sporotrichosis and dermatophytoses. The fusion protein is useful for reducing the amount of non-chitinase antifungal agent needed to exert an antifungal activity. The fusion protein is also useful for preparing a medicament for the prophylactic or therapeutic treatment of fungal infections. Chitinase immunoglobulin fusion product has unexpectedly improved serum half-life and formulation properties. The present sequence is human chitinase cDNA from clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel chitinase immunoglobulin fusion product, useful for treating fungal infections and reducing the amount of a non-chitinase antifungal agent needed for the treatment .
                                                                                                                                                                                                                                                                        Human: antifungal; chitinase; immunoglobulin; Ig; therapy;
fungal infection; candidiasis; aspergillosis; coccidioidomycosis;
blastcomycosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis;
chromoblastcomycosis; sporotrichosis; mucormycosis; dermatophytoses;
clone pMO-218; ss.
                                       GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA
                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/product= "Human chitinase from clone pMO-218"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mature chitinase from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Steiner
                                                                                                      CCGCCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1133
                                                                                        CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shaw
                                                                                                                                                                                                                                                        Human chitinase cDNA from clone pMO-218
                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 2..1402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Page 29-31; 39pp; English,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Human
                                                                                                                                                                              BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gray
                                                                                                                                                                              standard; cDNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US26960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0409918
                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product-
                                                                                                                                                                                                                                                                                                                                                                                                                                  2..64
/*tag= b
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĞN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dietsch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-266141/27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB; AAE00432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200123430-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Allison DS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ICOS-) ICOS
                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-SEP-1999;
                                                                                                                                                                                                                               19-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                            mat_peptide
                                      1043
                                                                                        1103
                                                                                                               1098
                                                                                                                                                                             AAD03759
                                                                                                                                                                                                      AAD03759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                 AAD03759
ID AAD(
                                                                                                                                                                                                                                                                                                                                                                                  Key
                                                                                                                                                     RESULT
                                       ŏ
                                                             q
                                                                                      ò
                                                                                                             a
                                                                                                                                                                                           용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                            ä
                                                                                                                                                    142
                                                                                                                                                                             143
                                                                                                                                                                                                      202
                                                                                                                                                                                                                            203
                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                              263
                                                                                                                                                                                                                                                                                                         322
                                                                                                                                                                                                                                                                                                                   264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGTGGAATTTCGGCACTCAGAAGTTCACAG 323
                                                                                                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                                                                                   443
                                                                                                                                                                                                                                                                                                                                                                                                                                                         502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             977
                                                                                                     82
                                                                                                                           83
                                                                                                                                                                                                                                                                 ATATGTAGCCACGCCAACAACGTCAGACCTTGTCAACTCGGCCATCAGGTTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATAGAATGGAATGATGTTACTCTTATAAAGCTTTCAATGACTTGAAAAAACAGGAACA
                                                                                                                                                                                                                                                                                                      263 GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                                                                                                         GTCAGTATGGGTTTGATGGACTGGACTGGGATTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                       AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITCCAACATCCAGGCTGGCTATGAGATCCCTGAACTICTAAGTACCTGGAIIICATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGCCCTGCTGCGCCCTATACCAGACAGGCTGGGGTTCTGGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                          CAGGITTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACT
                                                                                                                                                   TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                      CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                       CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                504 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCT-----GGAAGGGGCCCACCAAACAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                             Gaps
  this need
                                                   1636;
                                                                            ;
6
chitin-binding fragments of the present invention provide
                                                 DB 20; Length
                                                                          Indels
                           other;
                                                Score 426.8; DB 20;
Pred. No. 3.4e-119;
0; Mismatches 417;
                       BP; 361 A; 491 C; 440 G; 344 T; 0
                                                28.0%;
62.1%;
                                                             Local Similarity 62.1
les 693; Conservative
                          Seguence 1636
                                                                                                  23
                                                                                                                        24
                                                                                                                                                   83
                                                                                                                                                                          84
                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                     203
                                                                                                                                                                                                                                                                             204
                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                              324
                                                                                                                                                                                                                                                                                                                                                                                                       383
                                                                                                                                                                                                                                                                                                                                                                                                                                384
                                                                                                                                                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          924
                                                 Query Match
                                                             Best Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>a</u>
SXC
                                                                                                  à
                                                                                                                          셤
                                                                                                                                                    ò
                                                                                                                                                                        g
                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

PMO-218"

```
1;
                                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                   142
                                                                                                                                                             202
                                                                                                                                                                                                           CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                       322
                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                              502
                                                                                                                                                                                                                                                                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       622
                                                                                                                                                                                                                                                                                                   CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC 382
                                                                                                                                                                                                                                                                                                                                                                                                       GCAAATACAGCTTTGACGCCTTGACCTTGACTGGGAGTACCCAGGAAGCCAGGGGGAGCC 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGTCATGACATATGACTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       977
                                                                                                      82
                                                                                                                           83
                                                                                                                                                                                                                                                        GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                                                CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCTAAACTGGTCTGCTACT
                                                                                                                                                TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                              CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                            TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTATTGGAAGAACAÁTGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCAGTATGGGTTTGATGGACTGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACACATCATCATCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                     CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563 TITCCAACATCCAGGCIGGCIAIGAGAICCCIGAACTITCTAAGIACCIGGAITICAICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                Gaps
 pMO-218. Chitinase enzymė degrades chitin which is a homopolymer of
beta-(1,4)-linked N-acetylglucosamine residues.
                                                         Length 1636;
                                                                              ;
                                                                              Indels
                                 361 A; 491 C; 440 G; 344 T; 0 other;
                                                       Score 426.8; DB 22;
Pred. No. 3.4e-119;
0; Mismatches 417;
                                                       28.0%;
ilarity 62.1%;
Conservative
                                                                  Similarity
                                 Sequence 1636 BP;
                                                     Query Match
Best Local Simil
Matches 693; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    863
                                                                                                                                                 83
                                                                                                                                                                       84
                                                                                                                                                                                               143
                                                                                                                                                                                                                    144
                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                 204
                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                  323
                                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                                     384
                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     924
ខ្លួន្តខ្ល
                                                                                                                           염
                                                                                                                                                                      g
                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                     ò
                                                                                                                                                 à
                                                                                                                                                                                              ò
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                         1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA 1102
                                                                          Co-administering chitinase to improve the effectiveness of fungicidal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of cDNA clone MO-218 (ATCC 98077) encoding human chitinase (see ABB76291). The clone was isolated from a cDNA library prepared from peripheral blood monocyte-derived macrophages following sequence analysis. Also isolated was clone MO-13B (see AB£57381), which contains a single nucleotide difference in the coding region, changing the encoded amino acid at position 81 of the mature protein from glycine to serine. Northern blots showed highest chitinase gene expression in lung and ovary tissues. Expression in lung is consistent with a protective role against pathogenic corganisms that contain chitin. The invention provides inuman chitinase polynucleotides and polypeptides, and materials and methods for the recombinant production of human chitinase products,
                                                                                                                                                                                                                                                                                                                                   Chitinase; enzyme; human; fungicide; antifungal; infection; candidiasis; aspergillosis; coccidioidomycosis; blastomycosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis; chromoblastomycosis; sporotrichosis; mucormycosis; dermatophytosis; pneumocystis; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            drugs e.g. amphotericin B or itraconazole, useful for treating fun infections e.g. candidiasis, coccidioidomycosis and blastomycosis
                                                                                                                                          CCGCCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1133
                                                                                                                      CIGGCICTITCIGIGATCAGGGAAAAITICCICIGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Column 23-28; 26pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Chitinase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 2..1402
                                                                                                                                                                                                                                                                                                                        Human chitinase cDNA clone MO-218.
                                                                                                                                                                                                                                 BP
                                                                                                                                                                                                                              ABL57380 standard; cDNA; 1636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0663618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97US-0877599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= a
/product=
                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2..64
/*tag= b
65..1399
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-442449/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; ABB76291
                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo saptens
                                                                                                                                                                                                                                                                                          12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JS6372212-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                     1103
                                                                                                                                                   1098
                                                                                                                                                                                                                                                            ABL57380;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gray PW;
                                                                                                                                                                                               RESULT 8
ABL57380
                                                                                                                                                                                                                                             셤
                                                            ð
                                                                                     셤
                                                                                                                     δy
                                                                                                                                                 g
```

8\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$

요

ð g ò

٠ 8

g

g

ò

엄

ò

g

ò

셤

ò

셤 ò g ò 셤 ò ద

ç

g

ò

d

ò

à

```
1042
                                                                                                                                                                                                                                                      1102
                                                                                                                                                                                                                      1037
                                                                                                                                                                                                                                                                    982
                                                     922
                                                                                    923
                                                                                                                                                    977
                    863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A cDNA clone (AAT50833), designated chi.50, codes for a 50 kDa human chitinase (AAW08584) that is stable to many proteases, active at pH 3-8 and up to 50 deg, and stable in the circulation. Clones chi.50
     983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                          1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA
                                                     ATGCCCCTGCTGCCCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                     923 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                      924 CCT-----GGAAGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New human chitinase - used to treat or prevent infection by chitin-contg. pathogens, in diagnosis and as additives to cosmetics, foods, implants etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chitinase; chitotriosidase; chitin; infectious disease; gene therapy; vaccine; lysosomal lipidosis; daucher's disease; leishmanlasis; sarcoldosis; X-linked adrenoleukodystrophy; multiple sclerosis; drug delivery; cosmetics; food; ss.
                                                                                                                                                                                                                                                                                                                      CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                     1098 ccgccrrcrccrccaccaccaccaraccccrca 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
13..1413
/*tag= a
/*tag= b
/*tag= b
76..1410
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 2; Page 39-40; 58pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human chitinase cDNA clone chi.50
                                                                                                                                                                                                                                                                                                                                                                                                                                        BP
                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT50833 standard; cDNA; 1643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96WO-NL00225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-0486839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UNAM ) UNIV AMSTERDAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1997-118698/11.
P-PSDB; AAW08584.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9640940-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aerts JMFG;
                                                                                                                                                                                                                                                                                                                      1103
                      804
                                                       863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT50833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
                                                                                                                                                                                                                                                                                                                                                                                                                       AAT50833
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                    g
                                                                                                                     ò
                                                                                                                                                  g
                                                                                                                                                                                   á
                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          562
                                                                                                                                                                                                                                                                                                                                                                                                       142
                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     264 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        504 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                      82
                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                       ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                      TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563 TITCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
which are expected to be useful as products for treating fungal infections or for the development of such products. Human childranse has a synergistic effect on the actions of other fungicides. It can be administered to improve the antifungal activity of a non-chitinase antifungal agent, especially amphotericin B or itraconazole, in the treatment of a fungal infection such as candidiasis, aspergillosis, coccidioidomycosis, blastomycosis, paracoccidioidomycosis, histoplasmosis, cryptococcosis, chromoblastomycosis, histoplasmosis, mucormycosis, dermatophycoses and Pneumocystis infections (all claimed). In particular, the fungal infection involves Candida, Aspergillus and/or Cryptococcus spp., whose growth is not effectively inhibited by contact with human chitinase alone.
                                                                                                                                                                                                                                                                                                                                                                     24 CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      324 ATATGGTAGCCACGGCCAACAACGTCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     383 GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         443 CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                   Score 426.8; DB 24; Length 1636;
Pred. No. 3.4e-119;
0; Mismatches 417; Indels 6;
                                                                                                                                                                                                                                     Seguence 1636 BP; 361 A; 491 C; 440 G; 344 T; 0 other;
                                                                                                                                                                                                                                                                    28.0%;
62.1%;
                                                                                                                                                                                                                                                                                                   693; Conservative
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       263
                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                   84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             803
                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                     Matches
```

 ò

9 6 G

å

ద

ò

```
1042
                                                                                                                             1048
                                                                                                                                                                             1049 ATCTGAAGGAAGGACTGGGCGGGCCATGGTCTGGGCATGGACTTAGATGATGTTTG 1108
                                                                                                                                                             GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                 982
                                                              988
 934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pH 3-
 CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCT
                                  CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                    983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                A cDNA clone (AAT50834), designated chi.39, codes for a 39 kDa human chitinase (AAW08584) that is stable to many proteases, active at pH 38 and up to 50 deg, and stable in the circulation. Clones chi.39 and chi.50 (see also AAT50835) were isolated from a human macrophage cDNA library using as probe a partial clone obtd. using primers (see also AAT50835-36) based on a chitoriosidase purified from a type 1 Gaucher disease patient. The 2 cDNA clones are the result of alternative splicing of RNA. Chitinase nucleic acid can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to treat or prevent infection by dlagnosis and as additives to cosmetics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene therapy; vaccine; lysosomal lipidosis; Gaucher's disease; leishmaniasis; sarcoidosis; X-linked adrenoleukodystrophy; multiple sclerosis; drug delivery; cosmetics; food; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chitinase; chitotriosidase; chitin; infectious disease;
                                                                                                                                                                                                                           CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                          Location/Qualifiers
13.1176
13.15 a
13.75 /*tag= b
/*tag= b
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Page 42-43; 58pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Human chitinase cDNA clone chi.39
                                                                                                                                                                                                                                                                                                                                       standard; cDNA; 1713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New human chitinase - used to chitin-contg. pathogens, in foods, implants etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95US-0486839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96WO-NL00225
                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AMSTERDAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1997-118698/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB: AAW08585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9640940-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UNAM ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-JUN-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                    24-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aerts JMFG;
 875
                                                                                                                                                             1043
                                                                                                                                                                                                                           1103
                                                                                                                                                                                                                                                        1109
                                 923
                                                                935
                                                                                                                                                                                                                                                                                                                                                                     AAT50834;
                                                                                                                                                                                                                                                                                                                                     AAT50834
                                                                                                                                                                                                                                                                                                         RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
                                                                                                                                                                                                                                                                                                                                                       ò
                                                              g
                                                                                               ò
                                                                                                                            g
                                                                                                                                                             ò
                                                                                                                                                                                          g
                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                    쉱
                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                        142
                                                                                                                                                                                                                                                                                                                                                                                                                                                  154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        695 TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCCAGCCTCAACGTGGATGCTGCTGTGC 754
                                                                                                                                                                                                                                                                                                                                                                                                                                CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGCCCTGCTGCGCGCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA 922
                                                                                                                                                                                                                                                           CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802
                                                                                                                                                                                                                                                                                                                      CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                       CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                      TCACCAACTGGGCCCAGTATCGGCCAGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               563 TITCCAACAICCAGGCIGGCIAIGAGAICCCIGAACTIICTAAGIACCIGGAITITCAICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             623 ATGTCATGACATATGACTCCTCGCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                           Gaps
   macrophage
              cDNA library using as probe a partial clone obtd. using primers (see also AAT50835-36) based on a chitotriosidase purified from a type I Gaucher disease patient. The 2 cDNA clones are the result of alternative splicing of RNA. Chitinase nucleic acid can be used for large-scale prodn. Of recombinant human chitinases, or can be incorporated into a gene therapy vector to treat or prevent infection by chitin-contg. pathogens.
                                                                                                                                                                           Length 1643;
                                                                                                                                                                                                           ;
9
and chi.39 (see also AAT50834) were isolated from a human
                                                                                                                                                                                                           Indels
                                                                                                                                            Sequence 1643 BP; 364 A; 490 C; 442 G; 347 T; 0 other;
                                                                                                                                                                          Score 426.8; DB 18;
Pred. No. 3.4e-119;
0; Mismatches 417;
                                                                                                                                                                           28.0%;
62.1%;
                                                                                                                                                                                     Local Similarity 62.1
hes 693; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               395
                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                         23
                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                                                                                               155
                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                           Matches
```

```
Sequence 1768 BP; 401 A; 529 C; 474
                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                 Key
                                                                                                                                       AAT89181
ID AAT
                                                                                                                                                         g
                                                 ò
                                                                 ద
                                                                                   ò
                                                                                                    g
                                                                           Ĥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                             142
                                                                                                                                                                 202
                                                                                                                                                                                                                     274
                                                                                                                                                                                                                                                                        382
                                                                                                                                                                                                                                                                                                           442
                                                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                                                               514
                                                                                                                                                                                                                                                                                                                                                                                 562
                                                                                                                                                                                                                                                                                                                                                                                                  574
                                                                                                                                                                                                                                                                                                                                                                                                                   622
                                                                                                                                                                                                                                                                                                                                                                                                                                                       682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     988
                                                                                                                                               154
                                                                                                                                                                                  214
                                                                                                                                                                                                   CCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                     GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                                                     634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  934
                                                                                            82
                                                                                                            94
                                                                                                                                         CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                          TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGCCCCTGCTGCCCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 935 CCT-----GGAAGGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                             TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGCTTCAAGCCTGATGACATTAAACC
                                                                                                                                                                                                                                                275 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCGGCACTCAGAAGTTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                  515 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                  563 ITTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACAGTGGCTGCAGAAGGGGACCCCTGCCAGCAAGCTGATCCTTGGCATGCCTACGTACCTACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGITTCATGTCCTGTGATCCCATGGGGCTCTGCTCCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                   455 CTGCGGTAGACAAGGAGGGCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     623 ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                           23 CAGGICTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                         335 ATATGGTAGCCACGGCCAACAACGTCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGC
                                                                                                                                                                                                                                                                                                           GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                              CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                           Gaps
      ğ
                                                                           .
9
                                                         DB 18; Length 1713;
into a gene therapy vector to treat or prevent chitin-contg. pathogens.
                                                                           Indels
                                      Sequence 1713 BP; 380 A; 503 C; 465 G; 365 T; 0 other;
                                                       Score 426.8; DB 18;
Pred. No. 3.5e-119;
0; Mismatches 417;
     for large-scale prodn. of recombinant human
                                                         28.0%;
62.1%;
                                                        Ouery Match 28.0
Best Local Similarity 62.1
Matches 693; Conservative
                      þ
                      infection
                                                                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                                           395
                                                                                                           35
                                                                                                                            83
                                                                                                                                             95
                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                               503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                863
                                                                                                                                                                                                  203
                                                                                                                                                                                                                                     263
                                                                                                                                                                                                                                                                                                                                              443
     ន្តន្តន្តន
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                           셤
                                                                                                                                           g
                                                                                                                                                                               셤
                                                                                                                                                                                                 ò
                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                           ò
                                                                                                                             ò
                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
```

```
1042
                                                                                                                                             This human cDNA sequence encodes chitotriosidase (see AAW31498). It is a preferred variant of the chitotriosidase cDNA sequence given in AAT89180. Also claimed are: (1) a method of diagnosing a tissue remodelling disorder related to expression of a mutated chitotriosidase protein in a host comprising carrying out nucleic acid amplification; and (2) a method of detecting altered expression of a chitotriosidase protein in a host comprising contacting a bodily sample with an antibody. Chitotriosidase can degrade extracellular matrix substrates with a similar carbohydrate structure to chitin. It can be used to develop products which can be used in the diagnosis and treatment of tissue remodelling disorders such as rheumatold arrhritis or atheroselerosis. Chitotriosidase nucleic acids can be used in the recombinant production of the enzyme, and as probes or primers in diagnostic
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                               GCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene - used to develop products tissue remodeling disorders, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diagnosis; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ni J, Thotakura NR;
                                                                                                                                                                                                                      1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                     1109 CCGCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chitotriosidase; tissue remodelling disorder; rheumatoid arthritis; atherosclerosis; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kirkpatrick RB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
124..1524
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated human chitotriosidase for the diagnosis and treatment of rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human chitotriosidase variant cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                  BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HUMAN GENOME SCI INC.
SMITHKLINE BEECHAM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA; 1768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US05072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-0014295.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 21-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gentz R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1997-503041/46.
P-PSDB; AAW31498.
                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9736917-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-OCT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chopra A,
                                                                                                                                                                                                                                                                                                                                                                                                                  AAT89181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAT89181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-)
```

T; 1 other;

G; 363

```
Query Match
Best Local Similarity
                                                                                                                    15-JUN-1998
                                                                                                                                                                                                                                                                                                         18-DEC-1997
                                                                                                                                                                                                                               sig_peptide
                                                                                                                                                                                                                                                mat_peptide
                          1103
                                          1220
                                                                                  AAV10436
                                                                                                    AAV10436;
                                                                                                                                                                                                                                                                                                                                                                           Gray PW;
                                                                   12
                                                                             AAV10436
                                                                    RESULT
                                                                                            염
                          ò
                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1099
                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                   202
                                                                                                                    325
                                                                                                                                                                                                                      505
                                                                                                                                                                                                                                                                                                                                                                                                                            865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               982
                                                   205
                                                                   142
                                                                                                                                                                              382
                                                                                                                                                                                                                                                       565
                                                                                                                                                                                                                                                                       502
                                                                                                                                                                                                                                                                                                                         685
                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                    CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                    CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGATGAATC 385
                                                                                                                                                                                                                                      GTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCC 442
                                                                                                                                                                                                                                                                                       625
                                                                                                                                                                                                                                                                                                        AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA 562
                                                                                                                                                                                                                                                                                                                                                        686 AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA 745
                                                                                                                                                                                                                                                                                                                                                                                  742
                                                                                                                                                                                                                                                                                                                                                                                                                                            802
                                                                                                                                                                                                                                                                                                                                                                                                                                                            925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             862
                                                                                                             GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                   CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                     323 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                       CTCCTCAGGACAAGCATCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                         AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                        TITCCAACAICCAGGTGGCTAIGAGAICCCIGAACTTICTAAGIACCIGGAITICAICC
                                                                                                                                                                                                                                                                                                                                                                        ATGTCATGACATATGACCTCCATGGCTCCTGGGGAGGGCTACACTGGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                          TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCCCCTGCTGGCGCTATACCAGACAGGCTGGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCT-----GGAAGGGGCCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                  CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAAACCAAGGTCAGCT
                   Gaps
 Length 1768;
                   ;
6
                  Indels
Score 426.4; DB 18;
Pred. No. 4.7e-119;
1; Mismatches 417;
28.0%;
62.0%;
                 Conservative
         Similarity
                692;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1043
                                 23
                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                           743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1046
 Query Match
                                                                                  908
                                                                                                   143
                                                                                                                  997
                                                                                                                                    203
                                                                                                                                                    326
                                                                                                                                                                     263
                                                                                                                                                                                    386
                                                                                                                                                                                                                      146
                                                                                                                                                                                                                                     383
                                                                                                                                                                                                                                                       206
                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                       999
                                                                                                                                                                                                                                                                                                        503
                                                                                                                                                                                                                                                                                                                       626
                                                                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                         746
                                                                                                                                                                                                                                                                                                                                                                                                          683
                                                                                                                                                                                                                                                                                                                                                                                                                          806
                                                                                                                                                                                                                                                                                                                                                                                                                                                           998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              923
          Local
         Best Loca
                                                                  ò
                                                                                  g
                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                    g
                                                 음
                                                                                                   ö
                                                                                                                셤
                                                                                                                                  Qγ
                                                                                                                                                  셤
                                                                                                                                                                    ò
                                                                                                                                                                                  셤
                                                                                                                                                                                                     ð
                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                        oy
D
                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                       අ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

```
1160 ATCTGAAGCAGAAGGGACTGGGGCGCATGGTCTGGCACTGGACTTAGATGACTTG 1219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence encodes a novel human chitinase isolated from clone MO-13B. Chitinases are useful for treating or preventing fungal infection and as immunogens for generating antibodies which are used to purify, detect and quantify chitinases, e.g. for diagnosis of Gaucher's disease. The nucleic acid sequence of the chitinase is also useful as a probe to identify and isolate genomic DNA encoding chitinases or similar proteins, or cells expressing them or to generate transgenic ('knockout') rodents. It can also be used in hybridisation assays and to detect genetic alterations in the chitinase gene related to disease. Agents that inhibit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the extracellular matrix. Chitinase also improves the activity of other antifungal agents and may allow a reduction in the dose of such agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               this protein may be useful in treatment of Gaucher's disease and rheumatoid arthritis, where overexpression of the protein can damage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chitinase; human; fungal infection; immunogen; diagnosis; treatment; Gaucher's disease; transgenic; detection; hybridisation; antifungal; rheumatoid arthritis; overexpression; extracellular matrix; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 425.2; DB 19; Length 1656; Pred. No. 1.1e-118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding human chitinase - useful as antifungal agents, especially in combination with other antifungals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0 other;
                                                                                                                                  CCGGCTTCTCCTGCAACCAGGGCCGATACCCCCTCA 1255
                                                                                                   CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= c
/product= chitinase
/note= "from clone MO-13B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers 27..1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 9; Page 42-44; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA.
                                                                                                                                                                                                                                                                                                                                      BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fungal agents and may allow
thus of their side effects
                                                                                                                                                                                                                                                                                                                                      standard; cDNA; 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human chitinase clone MO-13B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.9%;
62.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US10460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-0663618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= b
90..1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-052316/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAW40260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W09747752-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-JUN-1996;
```

```
1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 982
                                                                                                                                                        142
                                                                                                                                                                                202
                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            683 TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        863 ATGGCCCTGCTGCCGCCTATACCAGACAGGCTGGGGTTCTGGGCCTACTATGAGATTTGCA 922
                                                                                                     108
                                                                                                                                                                                                                                                                                                                                                            CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                     82
                                                                                                                                                                                                                                                                                                                                                                                         ·||| ||||| |||| ||| || || || || || ||| || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   589 AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               949 CCT----GGAAGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    323 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     563 ITTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        889 CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGATGCTGGCCTACTATGAAGTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           923 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 003 rccgggacaaccagrgggrggggcrrrgargargrggagggcrrcaaaaccaaggrcagcr
                                                  CAGGTCTGGCTGTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                   49 CAGGITICAIGGICCIGCIGAIGAICCCAIGGGGCICIGCIGCAAAACIGGICIGCIACI
                                                                                                                                                                                                                                                           CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGCCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                     TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
  Gaps
  .
9.
  Indels
Mismatches 418;
  ö
Conservative
692;
                                                                                                                                                                                                                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  803
                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   503
                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                         203
                                                                                                                                                                                                                                                                                                                                                                                                                                                               263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                443
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                   ò
                                                                                                                                                                                                g
                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
```

```
This is the nucleotide sequence of an allelic form of the human chitianse enzyme, which is capable of degrading Chitin (a linear homo polymer of beta-1,4-linked N-acetylglucosamine residues).

Chitianse fragments can be used to screen for proteins or other molecules that specifically bind to the chitin-binding domain of human chitianse or that modulate its activity. These compounds are useful for immunization, as well as for purifying chitinase, as well as for detection and quantification of chitinase. Polynucleotide fragments of the invention are useful as a source of probes and primers, and to express the proteins recombinantly. The chitinase fragments, when conjugated to antifungal compounds are used to treat animals, especially humans, infected with chitin-containing parasites such as fungi. Fungal infection treated include candidasis, aspergillosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sporotrichosis, and dermatophytoses.
Chitin can be degraded by the enzyme chitinase. Use of whole chitinase protein for treating infections, is protein for treating infections, sepecially incidents of life-threatening problematic. In view of the increasing incidents of life-threatening fungal infection in e.g. immunocompromised individuals, there exists a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  treat fungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       coccidioidomycosis, blastomycosis, paracoccidioidomycosis, mucormycosis, histoplasmosis, cryptococcosis, chromoblastomycosis,
                                                                                                                                                                                                                                                 chitin; fungal infection; immunocompromised; AIDS; chemotherapy; organ transplant; parasite; chitin-binding; allele; vector; truncated protein; ds.
                                                                                                                                                                                                                  MO-13B clone of human Chitinase, with noncoding 5'/3' regions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fragments of human chitinase used to
1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                     27..1427
/*tag= a
/product= Human_Chitinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Mature peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 59-62; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= b
/note= "Signal
                                                                                                                   AA221848 standard; DNA; 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-0S05343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0039198
                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90..1427
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                                                           . 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gray PW, Tjoelker LW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel chitin-binding infections in animals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-551417/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; AAY42426
                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9946390-A1
                                                                                                                                                                                  10-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                           sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mat_peptide
                                                                                                                                                   AAZ21848;
                                                                                  13
                                                                                                   AAZ21848
                                                                                  RESULT
                                                                                                                                   ò
                             g
```

```
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  30-SEP-1999;
                                                                                                                                                             19-JUN-2001
                                                                                                                                                                                                                                                                                               sig_peptide
                                                                                                                                                                                                                                                                                                                mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                   Allison DS,
                                                                                                                                                                                                                                                                                                                                                                 05-APR-2001
                                                                                  1123
                                                                                                                                           AAD03760;
                                                                                                                                                                                                                                               Ношо
                                                                                                             RESULT 14
                                                                                                                                                                                                                                                               Key
                                                                                                                                    QQ
                                 δý
                                                 Db
                                                                  ò
                                                                                 g
                                                          ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               228
                                                                                          108
                                                                                                                    202
                                                                                                                                                                            CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAAACAGGAACA 262
                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                       GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                             CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC 382
                                                                                                                                                                                                                                                            349 ATATGGTAGCCACGGCCAACAACGTCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGC 408
                                                                                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                                                                               528
                                                                                                                                                                                                                                                                                                                                             503 AGGAGGCTATTGAGAĠCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA 562
                                                                                                                                                                                                                                                                                                                                                                                 622
                                                                                                                                                                                                                                                                                                                                                                                           682
                                                                                                                                                                                                                                                                                                                                                                                                                                   708
                                                                                                                                                                                                                                                                                                                                                                                                                                                   742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    888
                                                                                                                                                                                                                                                                                                                                                               AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802
                                                                           82
                                                                                                                                                     CAGGTTTCATGGTCCTGTTGATCATCCCATGGGGCTCTGCTGCAAACTGGTCTGCTACT
                                                                                                          TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                            CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGICTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                             GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                              CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                 ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                          GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                TITCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
compounds for treating fungal infection. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                          Gaps
        of the present invention provide this need
                                                          ;
6
                                          Length 1656;
                                         Score 425.2; DB 20; Length
Pred. No. 1.1e-118;
0; Mismatches 418; Indels
                        Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0 other;
                                        Query Match 27.9%;
Best Local Similarity 62.0%;
Matches 692; Conservative
need for identifying new
chitin-binding fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _
-
-
-
-
-
-
                                                                          23
                                                                                                           83
                                                                                                                           601
                                                                                                                                           143
                                                                                                                                                           169
                                                                                                                                                                            203
                                                                                                                                                                                                                                                                                                              443
                                                                                                                                                                                                                                                                                                                                                                                563
                                                                                                                                                                                                                                                                                                                                                                                                                                 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   69
                                                                                          49
                                                                                                                                                                                            229
                                                                                                                                                                                                             263
                                                                                                                                                                                                                                            323
                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                              691
                                                                                                                                                                                                                                                                                                                                                               529
                                                                                                                                                                                                                                                                                                                                                                                                589
                                                                                                                                                                                                                                                                                                                                                                                                                623
                                                                                                                                                                                                                                                                                                                                                                                                                                                  683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     923
22220
                                                                                         셤
                                                                                                                         8
                                                                                                                                                                          õ
                                                                                                                                                                                           g
                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                           ð
                                                                                                          ò
                                                                                                                                           ď
                                                                                                                                                          g
                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                               පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
```

```
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                                   1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a chitinase immunoglobulin (Ig) fusion product, comprising a human chitinase fused to at least a portion of an immunoglobulin chain. The fusion product is useful for treating fungal infections (mycoses) such as candidisals, aspergillosis, blastomycosis, coccidioidomycosis, prorecolosis, protections (mycoses, reproductions) and dermatophytoses. The fusion protein is useful for reducing the amount of non-chitinase antifungal agent needed to exert an antifungal activity. The fusion protein is also useful for preparing a medicament for the prophylactic or therapeutic treatment of fungal infections. Chitinase immunoglobulin fusion product has unexpectedly improved serum half-life and formulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel chitinase immunoglobulin fusion product, useful for treating fungal infections and reducing the amount of a non-chitinase antifungal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; antifungal; chitinase; immunoglobulin; Ig; therapy;
fungal infection; candidiasis; aspergillosis; coccidioidomycosis;
blastcomycosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis;
chromoblastcomycosis; sporotrichosis; mucormycosis; dermatophytoses;
clone pMO-13B; ss.
                                                                1003 TCCGGGACAACCAGTGGGTGGGCTTTGATGATGTGGAGAGCTTCAAAACCAAGGTCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= b
90.1424
//tag= c
/product= "Human mature chitinase from clone pMO-13B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pMO-13B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Human chitinase from clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Steiner
                                                                                                                                                                                                                                                                                                         CCGGCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1158
                                                                                                                                                                                                                                                                1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shaw KD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human chitinase cDNA from clone pMO-13B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
27..1427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; Page 34-36; 39pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agent needed for the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD03760 standard; cDNA; 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-SEP-2000; 2000WO-US26960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0409918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/product=
27..89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dietsch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-266141/27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ICOS-) ICOS CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAE00433.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200123430-A2
```

983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT GCCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGGCCATTGACCTTGATGACGTTCA 1103

음

1043

9

g

```
CCT-----GGAAGGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     862
                                                                                                                                         108
                                                                                                                                                               142
                                                                                                                                                                                     168
                                                                                                                                                                                                            202
                                                                                                                                                                                                                                   228
                                                                                                                                                                                                                                                           262
                                                                                                                                                                                                                                                                                  288
                                                                                                                                                                                                                                                                                                         322
                                                                                                                                                                                                                                                                                                                                348
                                                                                                                                                                                                                                                                                                                                                      382
                                                                                                                                                                                                                                                                                                                                                                             408
                                                                                                                                                                                                                                                                                                                                                                                                    442
                                                                                                                                                                                                                                                                                                                                                                                                                          468
                                                                                                                                                                                                                                                                                                                                                                                                                                                 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 982
                                                                                                                 82
                                                                                                                                                                                                                          CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCAGCACTCAGAAGTTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                               AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCITAIGECCIACGACTICCAIGECICTITGEGAGAAGGICACGGGACAIAACAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA
                                                                                                                                                                                                                                                                                                        GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                                                      CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                    CTGCCGTAGACAAGGAGCGCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTATIGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATIGTTGGATTCCCAGAGTAIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                         CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACT
                                                                                                                                                                                                             CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                    GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            563 TITCCAACAICCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCAICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGCACTCCAGGCCCCTTCACCAAGGAGGAGGATGCTGGCCTACTATGAAGTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                 CAGGICIGGCICITCIGCIGAAIGCICAGCIGGGGTCIGCCIACAAICIGAIAIGCIAIT
                                                                                                                                                               TCACCAACTGGGCCCAGGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                             Gaps
clone
              homopolymer
                                                                   Score 425.2; DB 22; Length 1656; Pred. No. 1.1e-118; 0; Mismatches 418; Indels 6;
 from
  CDNA
                                               other;
             ಥ
 s human chitinase
chitin which is a
                                              Sequence 1656 BP; 365 A; 497 C; 447 G; 347 T; 0
         pMO-13B. Chitinase enzyme degrades chitin which beta-(1,4)-linked N-acetylglucosamine residues.
  1.8
  sedneuce
                                                                    27.9%;
                                                                    Query Match 27.9
Best Local Similarity 62.0
Matches 692; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        623
                                                                                                                 23
                                                                                                                                       49
                                                                                                                                                              83
                                                                                                                                                                                     109
                                                                                                                                                                                                            143
                                                                                                                                                                                                                                   691
                                                                                                                                                                                                                                                           203
                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                        263
                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                             349
                                                                                                                                                                                                                                                                                                                                                                                                   383
                                                                                                                                                                                                                                                                                                                                                                                                                         £03
                                                                                                                                                                                                                                                                                                                                                                                                                                                 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     949
 88888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                 S
                                                                                                                                     셤
                                                                                                                                                              ò
                                                                                                                                                                               g
                                                                                                                                                                                                           ò
                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                            Dp
                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
Co-administering chitinase to improve the effectiveness of fungicidal drugs e.g. amphotericin B or itraconazole, useful for treating fungal infections e.g. candidiasis, coccidioidomycosis and blastomycosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is that of cDNA clone MO-13B (ATCC 98078) encoding human chitinase (see ABB76292). The clone was isolated from a cDNA library prepared from peripheral blood monocyte-derived macrophages using a probe based on human chitinase clone MO-218 (see ABL5780). The 2 clones contain a single nucleotide difference in the coding region, causing amino acid position 81 of the mature protein to be either serine or glycine. Northern blots showed highest chitinase gene expression in lung and ovary tissues. Expression in lung is consistent with a protective role against pathogenic organisms that contain chitin. The invention provides human chitinase polynucleotides and polypeptides, and materials and
                                                                                                                                                                                                                  Chitinase; enzyme; human; fungicide; antifungal; infection; candidiasis; aspergillosis; coccidioidomycosis; histoplasmosis; cryptococcosis; paracoccidioidomycosis; histoplasmosis; cryptococcosis; chromoblastomycosis; sporotrichosis; mucormycosis; dermatophytosis;
               CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                            "Chitinase"
                                                                                                                                                                                                                                                                                                                                  Location/Qualiflers
27..1427
                                                                                                                                                                                        Human chitinase cDNA clone MO-13B.
                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Column 31-34; 26pp;
                                                                                                   standard; cDNA; 1656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0877599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-0663618
                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/product=
27..89
                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= b
90..1424
/*tag= c
                                                                                                                                                                                                                                                                                                                                                                                           ..89
                                                                                                                                                                                                                                                                              Pneumocystis; gene; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-442449/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB; ABB76292
                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ICOS-) ICOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US6372212-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-JUN-1996;
                                                                                                                                                            12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                           sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                        mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1;
                            1123
                                                                                                 ABL57381
                                                                                                                            ABL57381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gray PW;
                                                                                     ABL57381
ID ABL
                                                                        RESULT
                                                                                                                  g
à
```

\$

ò 음

ð g ð 원 셤

ð

셤

à

Q à g G ò g ŏ 셤 à 셤

ò

qq

ò

ò

Search completed: July 3, 2003, 05:03:20 Job time: 351.54 secs

Sednence Sed

Sequence

Sequence Seq

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database

```
ADDRESSEE: Assault, O'Toole, Gerstein, Murray & Borun STREET: 233 South Wacker Drive/6300 Sears Tower CITY: Chlosqo STATE: 111inois STATE: 111inois COUNTRY: United States of America ZIP: 60606-6402 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COmpatible OPERATING SYSTEM: PACHILN FC-DOS/MS-DOS SOFTWARE: PACHILN FC-DOS/MS-DOS SOFTWARE: PACHILN FC-BOS/MS-DOS CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/039,198A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/09039198A
SERVERAL INFORMATION:
APPLICANT: Tjoelker, Larry W.
TILLE OP INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
US-09-292-225-19
US-09-292-225-14
US-09-292-225-14
US-09-292-225-40
US-09-292-225-42
US-09-292-225-37
US-09-292-225-37
US-09-292-225-34
US-09-292-225-34
US-09-545-814-28
US-09-545-814-30
US-09-545-814-28
US-09-545-814-28
US-09-545-814-28
US-09-545-814-28
US-09-545-814-28
US-09-545-814-30
US-09-545-814-30
US-09-545-814-30
US-09-545-814-30
US-09-545-814-30
US-07-939-501A-14
US-07-939-501A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
REFERENCE/DOCKET NUMBER: 27866/34391
TELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 474-6300
TELEPHONE: (312) 474-6300
TELEPHONE: (312) 474-6448
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 1636 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mat_peptide
65..1399
           16655
17655
17655
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
17752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 2..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                      112.8
112.8
112.8
112.8
112.8
112.8
109.6
64
           ט ט ט
                                                                      υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Appli
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                      (without alignments) 6355.472 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                              l atggccaagctacttctcgt......taaaattggtagccaaaaca 1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sednence Sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                         ; Search time 73.5873 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
                                   GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-267-574-3
US-08-694-915-1
US-08-694-915-3
PCT-US94-07754-4
US-08-581-527-4
US-08-524-051-1
US-09-545-814-15
US-09-545-814-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-151-011-5
US-09-343-623-5
US-09-039-198A-3
US-08-877-599-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                nucleic search, using sw model
                                                                                                                                                                                                      July 3, 2003, 04:38:16
                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0 . Maximum DB seq length: 20000000000
                                                                                                                                                                                                                                                                                                                US-10-004-219B-3
1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
```

Gaps

9

Indels

Score 426.8; DB 4; Pred. No. 6.6e-123; 0; Mismatches 417;

Query Match 28.0%; Best Local Similarity 62.1%; Matches 693; Conservative

Sequence Sequence Sequence

US-09-292-225-22

Sequence Sequence

426.8 4426.8 426.8 426.8 426.8 426.8 426.8 426.8 3330.8 3330.8 311.6

Š

υ Ü O

; LOCATION: US-09-039-198A-1

Length 1636;

```
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY:
; LOCATION:
US-08-877-599-1
                                                               US-08-877-599-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              203
ð
                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 142
                                                                                                                                                                                                                                                                             442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                 CCTGCCTGTGTACTCACCTGATCTATGCTTGCTGGGATGCAGAACAATGAGATCACCA 202
                                                                                                                                          CCATAGAATGGAATGÁTGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                     GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                  382
                                                                                                                                                                                                                                             443
                                                                                                                                                                                                                                                                                                                        502
                                                                                                                                                                                                                                                                                                                                                                   562
                                                                                                                                                                                                                                                                                                                                                                                                               622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT 982
                    TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACGTTAACC
                                                                                                           GCAAATACAGCTTTGACGCCCTTGACCTTGACCTGGGAGTACCCAGGAAGCCAGGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                  AGGAGGCTATTGAGAÇCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTTATGGCCTACGACTCCATGGCTCTTGGGAGAGGTCACGGGACATAACAGCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGICTGGCICTICTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCAAATTTCTGC
                                                                                                                                                                                                                                                                           GTCAGTATGGGTTTGATGGACTGGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                      CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                   AGGAAGCCCAGACCTCAGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                              TITCCAACAICCAGGCTGGCTAIGAGAICCCTGAACTITCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCCCTGCTGCCGCCTATACCAGACAGGCTGGGGTTCTGGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     924 CCT-----GGAAGGGGCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     978 TCCGGGACAACCAGTGGGTGGGCTTTGATGATGATGAGGAGAGCTTCAAAAACCAAGGTCAGGCT
                              24
                                                                                                                       144
                                                                                                                                                                                                                                323
                                                                                                                                                                                                                                                                                                                                             444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1038
         23
                                                    83
                                                                                                 143
                                                                                                                                                                204
                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                384
                                                                                                                                                                                                                                                                                                                      443
                                                                                                                                                                                                                                                                                                                                                                   503
                                                                                                                                                                                                                                                                                                                                                                                        504
                                                                                                                                                                                                                                                                                                                                                                                                              563
                                                                                                                                                                                                                                                                                                                                                                                                                                                         623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                    ð
                                                                      셤
                                                                                              ò
                                                                                                                    g
                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
        õ
                                                                                                                                         ò
                                                                                                                                                                                     ò
                                                                                                                                                                                                        g
                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
```

```
142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCATAGAATGGAATGATACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24 CAGGITTCATGGICCTGCTGATGATCCCATGGGGCTCTGCTGCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 CCTGCCTGTGTACTCACCTGATCTATGCTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23 CAGGICTGGCICTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83 TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Gray, Patrick W.
TITLE OF INVENTION: Chitinase Materials and Methods
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                   Gerstein, Murray &
South Wacker Drive
1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                     Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 426.8; DB 4;
Pred. No. 6.6e-123;
0; Mismatches 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 08/663,618
FILING DATE: 14-JUN-1996
ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
REFERENCE/DOCKET NUMBER: 27866/33994
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: 312/474-6300
                                                                                                                                                                                                                                                                                                                                                            STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/877,599 FILING DATE:
                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole,
STREET: 6300 Sears Tower, 233
                                                                                                                                                Sequence 1, Application US/08877599
Patent No. 6372212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match. 28.0%;
Best Local Similarity 62.1%;
Matches 693; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: 25-3856
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1636 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
65..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2..1399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linea
                                                                                                                                                                                                                                                                                                                    STREET: 6300 (CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
```

ï

82

143

셤

õ

ga &

g

g

ò

9 9 g

õ

ò

g

g ò 용 ò g õ 용 õ 8 à g õ 음 à g ò g

å

```
TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                             CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                      CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAAATACAGCTTTGACGGCCTTGACCTTGGGAGTACCCAGGAAGCCAGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           563 TITCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                       CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                Length 1636;
                                                                                                                                                                                                                                              Score 426.8; DB 4;
Pred. No. 6.6e-123;
0; Mismatches 417;
CURRENT FILING DATE: 1999-03-12
EARLIER APPLICATION NUMBER: 09/039,198
EARLIER FILING DATE: 1998-03-12
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PATENTIN VEY: 2.0
SEQ ID NO 1
                                                                                                                                                                                                                                                28.0%;
62.1%;
                                                                                                                                                                                                                                                                           Conservative
                                                                                                                 ORGANISM: Homo sapiens
                                                                                                                                                                                    ; NAME/KEY: mat_peptide
; LOCATION: (65)..(1399)
US-09-267-574-1
                                                                                                                                FEATURE:
NAME/KEY: CDS
LOCATION: (2)..(1399)
FEATURE:
                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                 Na.
Local 5...
693;
                                                                                     LENGTH: 1636
                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    503
                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             744
                                                                                                                                                                                                                                                Query Mat
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ογ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA 742
                          382
                                                                                                                 383
                                                                                                                                             442
                                                                                                                                                                                                   502
                                                                                                                                                                                                                               503
                                                                                                                                                                                                                                                            AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA 562
                                                                                                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                                                                 TITCCAACAICCAGGCIGGCIAIGAGAICCCIGAACTIICIAAGIACCIGGAITICAICC 622
                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                     683
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCAGCCAGCCTCAACGTGGATGCTGTGC 743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGCTCCTTCACACTGGCCTCCTCATCAGACACCAGAGTGGGGGGCCCCAGCCACAGGGT 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      863 ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGGTTCTGGGCCTACTATGAGATTTGCA 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCT 923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT 982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATC 263
                                                                                                                                                                                                                                                                                                                                                                         AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                  CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                          GTCAGTATGGGTTTGATGGACTGGACTGGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Gray, Patrick W.
APPLICANT: Tjoelker, Larry W.
TITLE OF INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS
FILE REFERENCE: 27866/33407
CURRENT APPLICATION NUMBER: US/09/267,574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGGCTTCTCCTGCAACCAGGGCCGATACCCCCTCA 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/09267574 Patent No. 6399571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09-267-574-1
                                                                                                                                                                                                                                                          503
                                                                                                                                                                                                                                                                                                                 563
                                                                                                                                                                                                                                                                                                                                              564
 204
                             263
                                                                                                                                          383
                                                                                                                                                                       384
                                                                                                                                                                                                   443
                                                                                                                                                                                                                               444
                                                                                                                                                                                                                                                                                     504
                                                                                                                                                                                                                                                                                                                                                                                                    624
                                                                                                                                                                                                                                                                                                                                                                                                                                 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                           684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   864
```

202

142

83

203

262

263

382 383 442 742

743 802 803

683

503 562 563 623 682

502

		443 CTCCTCAGGACAAGCATCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC 502	AGACCTATGTGGATGCTGGAGGGGGGGAGAAATCGCCCGGAGGTTTTGTCAATGCTGGATTTTGTCAATGCTGTGGATGTGGGTGG	743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802 1 1 1 1 1 1 1 1 1	923 CCTTTCTGAGAAGTGGAGCCTGGGATGCCTCCCAAGAAGTGCCTATGCCT 982	1043 GGCTTAAGCAGAACAATTTGGAGGTGCCATGATCTGGGCCATTGACCTTCATGACTTCA 1102
4 6 4 6 4 6	4 6 6 6 6	6 6 6 6	5	6 6 6 6 6	60 cy	o da o
803 GACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG	QY 1043 GGCTTAAGCAGATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTCA 1102 Db 1038 ATCTGAAGCAGAGGACTGGCGGGGCCATGGCTTGGACTTTG 1097 QY 1103 CTGGCTCTTTCTGGGCGGAAATTTCCTCTGA 1138 Db 1098 CCGCTTCTCTGCAGGCCGAAATTCCCTCTA 1111 111	Sequence 3, April 1991	o Turnpike or Turnpike ates of America M: Y disk Y Gisk PO-DOS/MS-DOS		SEQUENCE CHARACTERISTICS: LENGTH: 1643 base pairs TYPE: nucleic acid STRANDEDNES: unknown MODOLOGY: unknown HYPOTHETICAL: NO US-08-486-839-3	Query Match 28.0%; Score 426.8; DB 2; Length 1643; Best Local Similarity 62.1%; Pred. No. 6.6e-123; Matches 693; Conservative 0; Mismatches 417; Indels 6; Gaps 1; Oy 23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATGTTATTGTATT 82

us-10-004-219b-3.rni

```
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1049 ATCTGAAGCAGAAGGGACTGGGCGGGCCATGGTCTGGGCACTGGACTTAGATGACTTTG 1108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A human chitinase, its recombinant production, its use in therapy or prophylaxis against infection diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        988
                                                                                                                                       562
                                                                                                                                                                                                                        682
                                                                                                                                                                                                                                                                                                                                                                                              743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802
                                                                                                                                                                                                                                                                                                                                                                                                                  874
                                                                          502
                                                                                                        514
                                                                                                                                                                                                    622
                                                                                                                                                                                                                                                                                                 694
                                                                                                                                                                                                                                                                                                                                 TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA 742
                                                                                                                                                                                                                                                                                                                                                                754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         875 crescacrecassecerreaceaassaassassassarserescerararaasserescriber 934
                             515 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTGAGTGCAGCGGTTCCAGCTGGGC 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  923 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              863 ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                            TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCAGCCACCTCAACGTGGATGCTGTGC
                                                                                                                                         503 AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGTTAGCTGGTGGGGA
                                                                                                                                                                                                        TTTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                     ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
              GTCAGTATGGGTTTGATGGACTGGACTTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                          CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ccescrrcrccrccasccaseccaraccccrca 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/09343623; Pattent No. 6303118
GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Hoffmann & Baron
350 Jericho Turnpike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann
STREET: 350 Jericho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jericho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: Ur
ZIP: 11758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-343-623-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1109
              383
                                                                            443
                                                                                                                                                                                                        563
                                                                                                                                                                                                                                                                       623
                                                                                                                                                                                                                                                                                                    635
                                                                                                                                                                                                                                                                                                                                  683
                                                                                                                                                                                                                                                                                                                                                                  695
                                                                                                                                                                                                                                                                                                                                                                                                                                 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                            a
                                                                                                   g
                                                                                                                                       ò
                                                                                                                                                                       요
                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                            à
                                                                                                                                                                                                        à
                                                                                                                                      A Human Chitinase, Its Recombinant
Production, Its Use For Decomposing Chitin, Its Use in
Therapy or Prophylaxis Against Infection Diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143 CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            203 CCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263 GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            323 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCAACTGGGCCCAGTATCGGCCAGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
1109 CCGCCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1144
                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC Compatible
OPERTYS SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 28.0%; Score 426.8; DB 3; Best Local Similarity 62.1%; Pred. No. 6.6e-123; Matches 693; Conservative 0; Mismatches 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Morriss, Robert C.
REGISTRATION NUMBER: 42,910
REFERENCE/DOCKET NUMBER: 294-32 DIV
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/151,011
FILING DATE: 10 - September - 1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                      United States of America
                                                                                                                                                                                                                       3: Hoffmann & Baron, LLP 6900 Jericho Turnpike
                                                                          US/09151011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (516) 822-3582
INFORMATION FOR SEQ 1D NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (516) 822-3550
                                                                                                                          APPLICANT:
TITLE OF INVENTION: A HU
TITLE OF INVENTION: Prod
TITLE OF INVENTION: Ther
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                          Sequence 3, Application
Patent No. 6057142
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: unknown
                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CI
HYPOTHETICAL: NO
                                                                                                                                                                                                                                         STATE: Nor
                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                    COUNTRY:
                                                              US-09-151-011-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35
                                            RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
```

```
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A human chitinase, its recombinant production, its use for decomposing chitin, its use in therapy or prophylaxis against infection diseases.
                                                                                                                                                                                              862
                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                  802
                                                                                                                                                     814
                                                                                                                                                                                                                                   874
                                                                                                                                                                                                                                                                                                             934
635 ACCTTATGGCCTACGACTTCCATGGCTCTTGGGAGAAGGTCACGGGACATAACAGCCCCC 694
                                                         863 ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA 922
                                                                                                                                     683 TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                            GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                 815 GACGCTCCTTCACACTGGCCTCCTCATCAGACACCAGAGGGGGGGCCCCAGGCGT
                                                                                                                                                                                                                                                                                                             875 crescacrecasececerreaceaassaassassassarsersecerarearsaasrerser
                                                                                                                                                                                                                                                                                                                                                      923 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                            743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1109 CCGCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: Baron, Ronald J.
REGISTRATION NUMBER: 294-26
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 822-3550
TELEPHONE: (516) 822-3550
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHRRACTERISTICS:
LENGTH: 1713 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/486,839
FILING DATE: 07 - June - 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/08486839
Patent No. 5928928
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350 Jericho Turnpike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hoffmann & Baron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
TITLE OF INVENTION: A hy
TITLE OF INVENTION: pro
TITLE OF INVENTION: in
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 350 Jecticho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: UR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-486-839-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: .
                                                                                                                                                                                              803
                                                                                                                                                                                                                                   셤
                                      à
                                                                           셤
                                                                                                                  ğ
                                                                                                                                                     셤
                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323 CCATGGTTTCCACTTCTCAGAACCGCAGACCTTCATTACCTCAGTCATCAATTTCTGC 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215 CCACTGAGTGGAATGACGAGACTCTCTACCAGGAGTTCAATGGCCTGAAGAAGATGAATC 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCCGTAGACAAGGAGCGCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGC 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCATGACATATGACCTCCATGGCTCCTGGGGGGCTACACTGGGGGAGAATAGTCCTC 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGAAGCCCAGACCTCAGGGAAGGAACGCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            563 TITCCAACAICCAGGCIGGCIAIGAGAICCCIGAACIIICIAAGIACCIGGAIIICAICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       383 GICAGIAIGGGIIIGAIGGACIGGACCIGGACIGGGAAIACCCAGGCICACGIGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   443 CICCICAGGACAAGCAICTCTTCACTGTCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                    Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 426.8; DB 4;
Pred. No. 6.6e-123;
0; Mismatches 417;
                                                                                                                                                                                                            NAME: Baron, Ronald J. REGIGTRATION NUMBER: 29,281
REFERENCE/DOCKET NUMBER: 294-26
.TELECOMMUNICATION INFORMATION:
TELEPRAX: (516) 822-3550
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                 PRIOR APPLICATION DATA: | APPLICATION NUMBER: US/08/486,839 FLIANG DATE: 07-JUNG-1995 ATTORNEY/AGENT INFORMATION:
                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/343,623
                  PC-DOS/MS-DOS
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28.0%;
62.1%;
                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 693; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: CI
                                                                                                              FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                     SOFTWARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-343-623-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
```

合

6 a ð g a

ö g ò

à

g ð 셤 õ g

ò

ð

ö

ð 음 셤 ò 8 à

à

à

g

ò

a. y g В

ò

g

à

g õ 셤 à g ò g ò g ŏ 엄

å

```
983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              203 CCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: A Human Chitinase, Its Recombinant
TITLE OF INVENTION: Production, Its Use For Decomposing Chitin, Its Us
TITLE OF INVENTION: Therapy or Prophylaxis Against Infection Diseases.
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann & Baron, LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTCCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1713;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                  1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                       .8; DB 3;
6.8e-123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tch 28.0%; Score 426.8; al Similarity 62.1%; Pred. No. 6.8e 693; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Morriss, Robert C.
REGISTRATION NUMBER: 42,910
REFERENCE/DOCKET NUMBER: 294-32 DIV
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/151,011
FILING DATE: 10 - September - 1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: United States of America ZIP: 11791
                                                                                                                                                                                                                                                                                                                                                                                                           3: Hoffmann & Baron, LLP
6900 Jericho Turnpike
                                                                                                                                                                                                                                                      Sequence 5, Application US/09151011
Patent No. 6057142
GENERAL INFORMATION:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (516) 822-3550
TELEFAX: (516) 822-3582
INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS:
LENGTH: 1713 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Syosset STATE: New YOU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-151-011-5
                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
Matches 69
                              d
                                                                                         g
                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        do yo
                                                                 ò
                                                                                                                                                                                                                     142
                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            988
                                                                                                                                                                                                                                                                                                                         214
                                                                                                                                                                                                                                                                                                                                                        GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                             334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        934
                                                                                                                                                     82
                                                                                                                                                                                    94
                                                                                                                                                                                                                                                                                                         275 CCAAGCIGAAGACCCIGITAGCCATCGGAGGCIGGAATTICGGCACTCAGAAGTICACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGCCTGTGTACTCACCTGATCTATGCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             335 ATATGGTAGCCACGCCAACAACCGTCAGACCTTTGTCAACTCGGCCATCAGGTTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGCCCTGCTGCCCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     323 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTCCAAAACTGGTCTGCTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563 TTTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               815 GACGCICCTICACACIGGCCICCTCATCAGACACCAGAGIGGGGCCCCAGCCACAGGGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      875 CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCT
                                                                                                                                                  23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                                  TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCTCAGGACAAGCATCTCTTCACTGTCCTGCTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                  Gaps
                                                                                                                  9
                                                                                  Length 1713;
                                                                                                                  Indels
                                                                                Score 426.8; DB 2;
Pred. No. 6.8e-123;
0; Mismatches 417;
                                                                              Query Match 28.0%;
Best Local Similarity 62.1%;
Matches 693; Conservative
unknown
          · MOLECULE TYPE:
HYPOTHETICAL:
                                              US-08-486-839-5
                                                                                                                                                                                    35
                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                         215
                                                                                                                                                                                                                                                                                                                                                                                                                           263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    863
```

202

ò qq

142 154

94

Ţ

```
PatentIn Release #1.0, Version #1.30
                                                                        United States of America
                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/343,623
                                                                                                                                                                                                                    US/08/486,839
                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                         350 Jericho Turnpike
                                                                                                                                                                                                                                                       NAME: Baron, Ronald J.
REGISTRATION NUMBER: 29,281
REFERENCE/DOCKET NUMBER: 29.
TELECOMMUNICATION:
TELEPHONE: (516) 822-3550
                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08,
FILING DATE: 07-June-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                  TELEFAX: (516) 822-3582
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                    1713 base pairs
                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                unknown
               CORRESPONDENCE ADDRESS:
                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                  nucleic acid
  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 693; Conserv
                                                              New York
                                                                                                                                                                                                                                                                                                                                                                                                                 HYPOTHETICAL: NO
                                                Jericho
                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                             FILING DATE:
                                                                       COUNTRY: U
                         ADDRESSEE:
                                                                                                                                               SOFTWARE:
                                                                                                                                                          SOFTWARE
                                                                                                                                                                                                                                                                                                                                                       LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                    ; HYPUTHETTO
US-09-343-623-5
                                                CITY: J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382
                                                                                                                                   442
                                                                                                                                                                                502
                                                                                                                                                                                                                                                                                                                                                                            742
394
                                                                                                                                                           454
                                                                                                                                                                                                                                562
                                                                                                                                                                                                                                                                               622
                                                                                                                                                                                                                                                                                                      634
                                                                                                                                                                                                                                                                                                                              682
                                                                                                                                                                                                                                                                                                                                                    694
                                                                                                                                                                                                                                                                                                                                                                                        ACTATIGGAAGAACAAIGGAGCCCCAGCIGAGAAGCICAIIGIIGGAIICCCAGAGIAIG 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                  814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   863 AIGGCCCIGCIGGCGCCTATACCAGACAGGCIGGGTTCTGGGCCTACTATGAGATTIGCA 922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A human chitinase, its recombinant production, its use in therapy or prophylaxis against infection diseases.
                                                                                                                                                                                                                                                       574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT 982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGCACTCCAGGCCCCTTCACCAAGGAGGAGGGATGCTGGCCTACTATGAAGTCTGCT 934
                                   GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                323 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                               GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                             CTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                          AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                           563 TTICCAACAICCAGGCTGGCTAIGAGAICCCTGAACTITCTAAGIACCIGGAITICAICC
                                                                                                                                                                                                                                                                                         ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                         TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                            GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCT-----GGAAGGGGCCCACCAAACAGAGATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CIGGCICITICIGIGALCAGGGAAAAITICCICIGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGCCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/09343623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application Patent No. 6303118 GENERAL INFORMATION: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-343-623-5
                                   263
                                                                                                                                                                                                                                                                                                                           623
                                                                                                                                                                                                                                                                                                                                                                           683
                                                                                                                                383
                                                                                                                                                       395
                                                                                                                                                                               443
                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                695
                                                                                                                                                                                                                                                                                                                                                                                                                                               755
                                                                                                                                                                                                                                                                                                                                                                                                                        743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
          d
                                 å
                                                        쉽
                                                                              ò
                                                                                                      8
                                                                                                                               à
                                                                                                                                                  Q
                                                                                                                                                                              à
                                                                                                                                                                                                    g
                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                윱
                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

142 202 214 203 CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262 263 GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322 275 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGTGGAATTTCGGCACTCAGAAGTTCACAG 334 382 394 442 454 502 514 82 94 TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC 23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT CCTGCCTGTGTACTCACCTGATCTATGCCTTTTGCTGGGATGCAGAACAATGAGATCACCA 323 CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC GTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCC CTCCTCAGGACAAGCATCTCTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC crecceradacaacecerrecaacecrecrecraseacaacecaarecerrecaec ; 9 Length 1713; Indels DB 4; 28.0%; Score 426.8; DB 4; llarity 62.1%; Pred. No. 6.8e-123; Conservative 0; Mismatches 417;

σ

```
202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            529 AGGAAGCCCAGACCTCAGGGAAGGAACGCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       589 AGACCTATGTGGATGCTGGATACGAGGTGGACAAAATCGCCCAGAACCTGGATTTTGTCA 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  263 GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    623 ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTC 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCCAGCCTCAACGTGGATGCTGCTGTGC 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG 802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                   49 CAGGITICAIGGICCIGCIGAIGAICCAIGGGGCICIGCIGCAAAACIGGICIGCIACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          349 ATATGGTAGCCACGGCCAACAACAACAGCGTTTGTCAACTTGGCCATCAGGTTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCCGTAGACAAGGAGCGCTTCACAACCCTGGTACAGGACTTGGCCAATGCCTTCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                                                                                                                                                                                                                                                                                                                                                      CAGGICIGGCICITCIGCIGAAIGCICAGCIGGGGICIGCCIACAAICIGAIAIGCIAIT
                                                                                                                                                                                                                                                                                                                                                                                                                   TCACCAACTGGCCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCTCAGGACAAGCATCTCTTCACTGTCGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          563 ITTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                            Length 1656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
=
=
=
=
                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                         Score 425.2; DB 4;
Pred. No. 2.1e-122;
0; Mismatches 418;
    27866/34391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 =
=
=
=
=
=
REFERENCE/DOCKET NUMBER: 2786
TELECOMUNICATION INFORMATION:
TELEPHONE: (312) 474-6300
TELEFAX: (312) 474-648
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1656 base pairs
TYPE: NUCLEIC acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                         Query Match 27.9%;
Best Local Similarity 62.0%;
Matches 692; Conservative
                                                                                                                                                                                                                              mat_pept1de
90..1424
                                                                                                                                                                                     CDS
27..1424
                                                                                                                                        linear
                                                                                                                                     TOPOLOGY: line
MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                            US-09-039-198A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              323
                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                709
                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   988
                                                                                                                        682
                                                                                                                                                                                   742
                                                                                                                                                                                                                                               802
                                                                                                                                                                                                                                                                                                          862
                                                                                                                                                                                                                                                                                                                                       874
                                                                                                                                                                                                                                                                                                                                                                     922
                                                                                                                                                                                                                                                                                                                                                                                                                                 982
                                                             622
                                                                                                                                                      694
                                                                                                                                                                                                                754
                                                                                                                                                                                                                                                                            814
                                                                                                                                                                                                                                                                                                                                                                                                   934
                               574
                                                                                            634
                                                                                                                                                                                                            695 TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCAGCCAGCCTCAACGTGGATGCTGCTGTGC
                                                                                                                                                                                                                                                                                                                          TTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                          923 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCTATGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              935 CCT----GGAAGGGGGCCACCAAACAGAATCCAGGATCAGAAGGTGCCCTACATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT
   AGGAGGCTATTGAGAGCACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGA
                              515 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                            563 TITCCAACAICCAGGCIGGCIAIGAGAICCCIGAACIITCTAAGIACCIGGAITICAICC
                                                                             ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGCTACACTGGGGAGAATAGTCCTC
                                                                                                                                                                                                                                                                                                        GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                   ATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Borun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Gray, Patrick W.
APPLICANT: Tjoelker, Larry W.
TILLE OF INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Marshall, O'Toole, Gerstein, Murray, STREET: 233 South Wacker Drive/6300 Sears Tower CITY: Chicago STATE: 1111nois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1103 CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1109 CCGCTTCTCCTGCAACCAGGCCGATACCCCCTCA 1144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/09/039,198A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3, Application US/09039198A Patent No. 6200951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, Li-Hsien
REGISTRATION NUMBER: 33,547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-039-198A-3
                                                                                                                                                                                                                                                                                                                                                                   863
                                                                                                                                                                                                                                            743
                                                                                                                       623
                                                                                                                                                                                   683
                                                                                                                                                                                                                                                                                                        803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                            q
                                                             à
                                                                                       셤
                                                                                                                       ð
                                                                                                                                                  a
                                                                                                                                                                                   ò
                                                                                                                                                                                                         요
                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
```

ä

```
CCT-----GGAAGGGGCCCACCAAACAGAGAATCCAGGATCAGAAGGTGCCCTACATCT 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                 108
                                                                                                                                                                             142
                                                                                                                                                                                                           168
                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                    228
                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                       348
                                                                                                                                                                                                                                                                                                                                                                                                                     382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    982
                                                                                                                                                                                                                                                                                                                                                           322
                                                                                                                                                                                                                                                                                                                                                                                                                                                408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        468
                                                                                                                     82
                                                                                                                                                                                                                                     49 CAGGTTTCATGGTCCTGCTGATGATCCCATGGGGCTCTGCTGCAAACTGGTCTGCTACT
                                                                                                                                                                               TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC
                                                                                                                                                                                                                                                                                                   CCATAGAATGGAATGATGTTACTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA
                                                                                                                                                                                                                                                                                                                                                                                       289 CCAAGCTGAAGACCCTGTTAGCCATCGGAGGCTGGAATTTCAGCACTCAGAAGTTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                    709 TCTACAAGAGGCAAGAAGAGAGTGGTGCAGCCAGCCTCAACGTGGATGCTGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 863 ATGCCCCTGCTGCCCCTATACCAGACAGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        889 CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCT
                                                                                                                    23 CAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATT
                                                                                                                                                                                                GCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTA
                                                                                                                                                                                                                                                                                                                                                                                                                     CCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383 GTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             529 AGGAAGCCCAGACCTCAGGGAAGGAACGCCTTCTTCTGAGTGCAGCGGTTCCAGCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITCCAACAICCAGGCIGGCIATGAGAICCCIGAACTITCIAAGIACCIGGAITICAICC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCTCAGGACAAGCATCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGGAATAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT
                                                                                          Gaps
                                                                                        9
                                                       Length 1656;
                                                                                        Indels
                                                         Score 425.2; DB 4;
Pred. No. 2.1e-122;
0; Mismatches 418;
                                                         27.9%;
                                                                                        Conservative
                                                                          Similarity
                 LOCATION:
                                                                                      Matches 692;
                             US-08-877-599-3
                                                                                                                                                                               83
                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 803
                                                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                                                                                           263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  949
                                                          Query Match
Best Local
                                                                                                                                                 g
                                                                                                                                                                               ò
                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                    CCT-----GGAAGGGGCCCACCAAACAGAGATCCAGGATCAGAAGGTGCCCTACATCT 1002
                                                                                                                                                                                                                          983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042
                                                                                                                                                                                                                                                                    1043 GGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACCTTGATGACTTCA 1102
                                                                                                                                                 CCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCT 982
                                                                                                                    889 CTGGCACTCCAGGCCCCTTCACCAAGGAAGGAGGGATGCTGGCCTACTATGAAGTCTGCT 948
AACAGTGGCTGCAGAAGGGGACCCCTGCCAGCAAGCTGATCCTTGGCATGCCTACG
                                                                                      ATGGCCCTGCTGCCCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCA
                             GACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTG
                                           Gerstein, Murray & Borun
South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Gray, Patrick W.
TITLE OF INVENTION: Chitinase Materials and Methods
NUMBER OF SEQUENCE: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                              CTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGA 1138
                                                                                                                                                                                                                                                                                                                                                STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-4002
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC: Compatible
OPERATING SYSTEM: PC:DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RECISTRATION NUMBER: 33,547
REFERENCE/DOCKET NUMBER: 27866/33994
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/663,618
FILING DATE: 14-UN-1996
ATTORNEY/AGENT INFORMATION:
NAME: Rin-Laures, L1-Halen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/877,599
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08877599
Patent No. 6372212
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      s: Marshall, O'Toole,
6300 Sears Tower, 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1656 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             312/474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
27..1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
STREET: 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-877-599-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: C
STATE:
                                                                                                                                                                             949
                                                                                                                                                                                                                                                                                                                              1103
                                                                                                                                                                                                                                                                                                                                                          1123
                           803
                                                                                                                                                 923
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
                           à
                                                         셤
                                                                                      à
                                                                                                              8
                                                                                                                                                à
                                                                                                                                                                            g
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                     8
```

us-10-004-219b-3.rni

503 - 503 -	649 ACCITATGCCTACGCTCTTGCCTCCTGGGGGCTCACGGGGGCTTATGCCCCCCCC	Qy 743 ACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATGTTGGATTCCCAGAGTATG 802	OY 863 AIGGCCTGCTGCTGCGCCTATACCAGACAGCTGGGTTCTGGGCCTACTATGAGATTGCA 922	Qy 983 ATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGT 1042	OY 1043 GGCTTAAGCACAATTTTGGAGGTGCCATGATCTTGACCTTCATGACTTCA 1102	n US/08694915 Julie rick, Robert rg, Martin	2883798	COMPUTER READABLE FORM: COMPUTER READABLE FORM: MEDIUM TYPE: Diskette COMPUTER: IBM Compatible OPERATING SYSTEM: DOS SOFTWARE: FastSEQ Version 1.5 CURRENT APPLICATION NUMBER: US/08/694,915 FILING DATE: CLASSIFICATION:
	RESULT 12 US-09-267-574-3 Sequence 3, Application US/09267574 ; Patent No. 6399571 ; GENERAL INFORMATION: ; APPLICANT: Gray, Patrick W.	; APPLICANT: TJOELKET, Larry W. ; TITLE OF INVENTION: CHITINASE CHITIN-BINDING FRAGMENTS ; FILE REFERENCE: 27866/35407 ; CURRENT APPLICATION NUMBER: US/09/267,574 ; CURRENT FILING DATE: 1999-03-12 ; EARLIER APPLICATION NUMBER: 09/039,198 ; EARLIER FILING DATE: 1998-03-12 ; NUMBER OF SEO ID NOS: 39	SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 3 LENGH: 1656 TYPE: DNA ORGANISM: Homo sapiens FEATURE: NAME/KEY: CDS	; LOCATION: (27)(1424) ; FEATURE: ; NAME/KEY: mat_peptide ; LOCATION: (90)(1424) US-09-267-574-3) , , ,	83 TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACTTAACC [OY 203 CCATGARATGARATGATGATGATGARAGGAACA 262	Oy 323 CCATGGTTTCTCAGAACCGCCAGACCTTCATACCTCAGTCATATTCTGC 382

```
1014
                                                                                                                                                                      873
                                                                                                                                                                                                                                                                                                                            990
                 CCCCTTATCACTGGCCACAACAGCCCTCTGAGCAAGGGGTGGCAGGACAGAGGCCAAGC 756
                                                                                                                                834
                                                                                                                                                                                                           894
                                                                                                                                                                                                                                                 933
                                                                                                                                                                                                                                                                                       954
                                                       774
                                                                                                                                                                                                                               775 AAGCTCATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGAT
                                                                                                                                                                                                                                                                                                                                                              955 GATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAAT
                                                                                                                                                                                                                                                                                                                                                                                        991 CTCCAGGATCAGCAGGTTCCCTACGCAGTCAAGGGGAACCAGTGGGGGGGTATGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1051 GTGAAGAGTATGGAGACCAAGGTTCAGTTCTTAAAGAATTTAAACCTGGGAGGAGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1075 ATCTGGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCT
                                                                                             757 TCCTACTACAATGTGGAATATGCTGTGGGGTACTGGATACATAAGGGAATGCCATCAGAG
                                                                                                                                                                                                           835 AATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCCTATACCAGACAGGCT
                                                                                                                                                                                                                                                                                       895 GGGTTCTGGGCCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                         1015 ATCAAGAGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Adamou, Julie
APPLICANT: Kirkpatrick, Robert
APPLICANT: Rosenberg, Martin
APPLICANT: TILE OF INVENTION: HUMAN CARTILEGE GP39-LIKE GENE
NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1135 CTGACTTCTACTTTGAACAAAGCCCTTGGC 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: SmithKline Beecham Corporation
709 Swedeland Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/694,915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/08694915
Patent No. 5811535
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YSTEM: DOS
FastSEQ Version 1.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: ATC
FELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: SmithKline
STREET: 709 Swedeland
CITY: King of Prussia
STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA APPLICATION NUMBER: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Han, William T
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19406-2799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
US-08-694-915-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                   697
                                                       715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP:
                                                                                                                                                                      q
                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                                                        ď.
                                                       ŏ
                                                                                           g
                                                                                                                                  δ
                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAAG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361 ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGAACTGGGAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      352 TITGGTICCAAAGGGTICCACCCIAIGGIGGATICTICIACAICACGCIIGGAAIICAII 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGCGGGCGTATCTGCAGGGAGGCAAATGATTGATAACAGCTATCAAGTTGAGAAACTG 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --GGGCTACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAAT 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ATGCCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ITCAAGCCTGATGACATTAACCCCTGCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCAGAACAATGAGATCACCACATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  232 ATCGAAAACAACAAGGTTATCATCAAGGACAAGAGTGAAGTGATGCTCTACCAGACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 AATGACTIGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           292 AACAGICICAAAACCAAGAAICCCAAACIGAAAAIICICIIGICCAIIGGAGGGIACCIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----TCAGAAAGAAACACTCATTTCACTGTGCTGATTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAAAAGATCTGGATTTCATCAACCTCCTGTCCTTTGACTTCCATGGGTCTTGGGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52 Aricaccadaagrereteregecadererageererreerecreerecadegagearer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 343.2; DB 1;
Pred. No. 7.2e-97;
0; Mismatches 458;
                                                                                                              ATG50017
                                                                                             34,344
                                                                                     REGISTRATION NUMBER: 34,344
REFERENCE/DOCKET NUMBER: AT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
TELEFAX: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                                                                                                                       22.5%;
58.5%;
                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 1 SEQUENCE CHARACTERISTICS: LENGTH: 1433 Base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 58.5
Matches 685, Conservative
                                                                         Han, William T
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472 TACCCAGA------
                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                          ; ANTI-SENSE: NO
; FRAGMENT TYPE:
; ORIGINAL SOURCE:
US-08-694-915-1
                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              657
```

ò g ò g ò a ò a ò g à 원 δ 셤 ογ a ò g ò g ò us-10-004-219b-3.rni

```
1138 GATGATGTGAAGAGTATGGAGACCAAGGTTCATAAAGAATTTAAACCTGGGAGGA 1197
                                                                                                                                                                                                      GCCATGATCTGGGCCATTGACCTTGACTTCACTGGCTCTTTCTGTGATCAGGGAAAA 1128
                                                                                                                                                                                                                                   1198 GCCATGATCTGGTCTATTGACATGGATGACTTCACTGGCAAATCCTGCAACCAGGGCCCT 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              889 CAGGCTGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAG 948
                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application PC/TUS9407754
GENERAL INFORMATION:
APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
ATTLE OF INVENTION: ASSAY FOR YKL-40 AS A MARKER FOR
TITLE OF INVENTION: DEGRADATION OF MAMMALIAN CONNECTIVE TISSUE MATRICES
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                       GACAATATCAAGAGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGT
                                     1021 TCTTCAGGCTTCCTGGCCTATTATGAGATCTGCCAGTTCCTGAAA----GGAGCCAAGATC
                                                                    949 GTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5; Length 1681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches 437; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: PCT/US94/07754 FILING DATE: 08-JUL-1994 CLASSIFICATION:
                                                                                                                                                                                                                                                                     1129 TITCCTCTGACTTCTACTTTGAACAAAGCCCTTGGC 1164
                                                                                                                                                                                                                                                                                                    1258 TACCCTCTTGTCCAAGCAGTCAAGAGGAAGCCTTGGC 1293
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: CALIFORNIA
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 314.8; DB 5
Pred. No. 5.7e-88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE DOCKET NUMBER: FD TELECOMMUNICATION INFORMATION: TELEPHONE: 619/455-5100
TELEFAX: 619/455-5110
INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS: LENGTH: 1681 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: HOWELLS, STACY L.
REGISTRATION NUMBER: 34,842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              641; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 90067
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 135..1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: D
IMMEDIATE SOURCE:
CLONE: YKL-40
                                                                                                                                                                                                                                                                                                                                                        RESULT 15
PCT-US94-07754-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; LOCATION:
PCT-US94-07754-4
                                                                                                                                    1009
                                                                                                                                                                                                      1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                    a
                                                                      ò
                                                                                                                                    ò
                                                                                                                                                                   셤
                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                 요
                                                                                                                                                                                                                                                                       ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        379 ACCATCAACAGTCTCAAAACCAAAATCCCAAAATTCTCTTGTCCATTGGAGGG 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55 GGGTCTGCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTG 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   439 TACCTGTTTGGTTCCAAAGGGTTCCACCCTATGGTGGATTCTTCTACATCACCCTTGGAA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGAC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         504 ATTCATGAGTTAGCAGAAGCCTTTCAGAAAGACTTCACAAAATCCACCAAGGAAAGGCTT 663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      655 GA-----GGGCTACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGT 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         769 GCTGAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCC 828
                                                                                                                                                                                                                                                                                                                                                     115 GGGAGCTTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTT 174
                                                                                                                                                                                                                                                                                                                                                                                                                      175 GCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAA 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      235 GCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295 IGGAACTITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACC 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     475 GTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTG 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      709 AGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCA 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          595 GAACTITCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCCATGGCTCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499 TICATIAACTCCATAAICCIGITICIGAGGAACCAIAACTIIGAIGGACTGGAIGIAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 TGGGAATACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTG
                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                      27;
                                                                                                                                                                                                                     Length 1526;
                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                  0; Mismatches 432;
                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                   Score 330.8; DB
Pred. No. 5.5e-93
                                                                                                                                                                                                                  21.7%;
58.9%;
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1526 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
     <u>۳</u>
                                                                                                                                                                                                                                 Best Local Similarity 58.9
Matches 657; Conservative
                                                                                                MOLECULE TYPE: CDNA HYPOTHETICAL: NO ANTI-SENSE: NO
                                                                                                                                                FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                   US-08-694-915-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     355
                                                                                                                                                                                                                     Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
1089 TACCTGAAGGATGGCAGCTGGCAGCCCATGGTATGGCCCTGGACCTGGATGACTTC 1148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               972 GACTICCT----CCGCGGGAGCCACATAGAACCCTCGGCCAGCAGGAGCCCTATGCC 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAG 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1029 ACCAAGGGCAACCAGTGGGTAGGATACGACGACCAGGAAGGGTCAAAAGCAAGGTGCAG 1088
333 CCCAACCTGAAGACTÇTCTTGTCTCGGAGGATGGAACTTTGGGTCTCAAAGATTTTCC 392
                                                                                                                                                                                                                                                                                   AAGATAGCCTCCAACACCCCAGAGTCGCCGGACTTTCATCAAGTCAGTACCGCCATTTCTG 452
                                                                                                                                   261
                                                                                                                                                 CGTCAGTATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGC 441
                                                                  201
                                                                                                                                                                                                                                                                ACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTG 381
                                                                                                                                                                                                                                                                                                                                                                                             CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAG 501
                                                                                                                                                                                                                                                                                                                                                                                                                 -----GACAAAÇACCATTTACCACCTAATCAAGGAAATGAAGGCCGAATTATA 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCCAACATCCAĞĞTGGCTATGAGATCCCTGAACTTTCTAAGTACTGGATTTCATC 621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTTCCGAGGTCAGGAGGATGCAAGTCCTGACAGATTCAGCAACACTGACTATGCTGTG 794
                                                                                                                                                                                               262 AGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             558 AAGGAAGCCCAGCCAGGGAAAAAGC---AGCTCCTGCTCAGCGCAGCACTGTCTGCGGGG 614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              675 AGCATCATGACCTACGATTTTCATGGCGCCTGGCGTGGGGACCACAGGCCATCACAGTCCC 734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATG 741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGT 861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGC 921
                                                                                                                                ACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTTAGTGGTGGG
                                                                CCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGTACATGTIGAGGÇTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATCCCCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGAGGAGCTTCACTCTG---GCTTCTTCTGAGACTGGTGTTCCAGCGCCAATCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTITCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCC
                                                                                                                                                                                                                                                                                                                                               CATGICATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 912 CCGGGAATTCCAGGCCGGTTCACCAAGGAGGCAGGACCCTTGCCTATGAGATCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           742 AACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1042 TGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCCATTGACCTTGATGACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGGCTCCTTCTGCGGCCAGG 1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1102 ACTGGCTCTTTCTGTGATCAGG 1123
                                                                                              213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           855
                                                                                                                                202
                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                             393
                                                                                                                                                                                                                                                                                                                              382
                                                                                                                                                                                                                                                                                                                                                            453
                                                                                                                                                                                                                                                                                                                                                                                             442
                                                                                                                                                                                                                                                                                                                                                                                                                            507
                                                                                                                                                                                                                                                                                                                                                                                                                                                              502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
염
                                                                                                                              ò
                                                                                                                                                               g
                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       d. y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 qq
                                                                                                                                                                                             à
                                                                                                                                                                                                                                                              à
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
```

Search completed: July 3, 2003, 08:43:20 Job time : 75.5873 secs

```
22 23 23 23
   0 0
                                                                                                                       July 3, 2003, 05:03:26; Search time 267.722 Seconds (Without alignments) 8891.723 Million cell updates/sec
                                                                                                                                                                                                     US-10-004-219B-3
1525
1 atggccaagctacttctcgt......taaaattggtagccaaaaca 1525
               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                        1085931 seqs, 780495707 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post_processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                       Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                        Searched:
                                                                                                                             Run on:
```

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:* 2: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:* 3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:* 4: /cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:* 5: /cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:* 6: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:* 7: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:* 8: /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:* 9: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:* 10: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:* 11: /cgn2_6/ptodata/1/pubpna/US09_DUBCOMB.seq:* 12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:* 13: /cgn2_6/ptodata/1/pubpna/US00_NEW_PUB.seq:* 14: /cgn2_6/ptodata/1/pubpna/US00_NEW_PUB.seq:* 14: /cgn2_6/ptodata/1/pubpna/US00_NEW_PUB.seq:*

Published_Applications_NA:*

..

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Sequence 3. Appli	Sequence 2, Appli	Sequence 14. Appl	Sequence 402, App	Sequence 678, App	Sequence 44, Appl		Sequence 4, Appli	Sequence 8, Appli	Sequence 2589, Ap	Sequence 13050, A	Sequence 7364, Ap	Sequence 3057, Ap	Sequence 3072, Ap	Sequence 265, App	149		Sequence 14460. A	Sequence 20, Appl	
	ID	US-10-004-219B-3	US-10-004-219B-2	US-10-202-436A-14	US-09-822-830A-402	US-09-960-352-678	US-10-097-340-44	US-09-215-077A-4	US-09-262-213A-4	US-09-765-231A-8	US-09-960-352-2589	US-09-960-352-13050	US-09-960-352-7364	US-09-960-352-3057	US-09-960-352-3072	US-09-960-352-265	US-09-960-352-14919	US-09-960-352-5721	US-09-960-352-14460	US-10-218-743-20	
	DB	9	6	6	10	10	Φ	10	10	10	10	10	10	10	10	10	10	10	10	6	
	Query Match Length DB	1525	1625	1038	1391	449	1925	1681	1681	1474	415	414	410	424	418	399	411	384	398	1608	
æ	Query	100.0	68.3	28.2	21.5	21.5	21.0	20.4	20.4	17.0	10.0	9.8	9.7	9.7	9.7	6.8	8.8	8.4	8.5	8.0	
	Score	1525	1041	430	327.6	327.2	319.6	311.6	311.6	259.8	152.2	149.6	148	148	147.4	136.2	134.8	127.8	124.6	121.4	
	Result No.	н	7	m	4	S	9	7	80	σ	10	11	12	13	14	c 15	16	c 17	c 18	19	

20 121.4 8.0 1608 9 US-10-218-743-22 Sequence	121.4 8.0 1665 9 0S-10-218-743-19 Sequence 121.4 8.0 1752 9 0S-10-218-743-14 . Sequence 121.4 8.0 1752 9 0S-10-218-743-16 Sequence 112.8 7.4 1470 9 0S-10-218-743-40 Sequence	112.8 7.4 1470 9 US-10-218-743-42 Sequence 112.8 7.4 1527 9 US-10-218-743-37 Sequence 112.8 7.4 1527 9 US-10-218-743-39 Sequence	112.8 7.4 1621 9 US-10-218-743-34 Sequence 112.8 7.4 1621 9 US-10-218-743-36 Sequence 97.8 6.4 373 9 US-09-918-995-8214 Sequence 91.2 6.0 437 9 US-09-918-995-35463 Sequence	83 5.4 416 9 US-09-918-995-6770 Sequence 80.2 5.3 181 9 US-09-796-692-9551 Sequence	35 80.2 5.3 181 9 US-10-040-862-9551 Sequence 35 79.8 5.2 438 10 US-09-960-352-1882 Sequence 35 79.8 5.2 438 10 US-09-960-352-1882 Sequence 35 79.8 5.2 438 10 US-09-960-352-1882	3/ 79.2 5.2 430 10 US-U3-50U-552-1121U0 Sequence 38 78.8 5.2 430 10 US-09-960-352-1189 Sequence 39 78.2 5.1 422 10 US-09-960-352-4957 Sequence	76.6 5.0 422 10 US-09-960-352-10642 Sequence 76.2 5.0 419 10 US-09-960-352-4053 Sequence 76.2 5.0 419 10 US-09-960-352-4053	c 42 76.2 5.0 419 10 US-09-960-352-10172 Sequence 10172, A 43 75.2 4.9 426 10 US-09-960-352-4979 Sequence 4979, Ap c 44 74.8 4.9 410 10 US-09-960-352-48317 Sequence 8317, Ap c 45 74.8 4.9 440 10 US-09-960-352-4058 Sequence 4058, Ap	ALIGNMENTS	RESULT 1 US-10-004-219B-3 Sequence 3, Application US/10004219B Publication No. US20030087414A1 GENERAL INFORMATION: APPLICANT: Macrozyme APPLICANT: Boct, Nolf G. TITLE OF INVENTION: A mammalian muclnase, its recombinant production, and TITLE OF INVENTION: A mammalian muclnase, its recombinant diseases in TITLE OF INVENTION: Which mucus is involved or infection diseases in TITLE OF INVENTION: Which mucus is involved or infection diseases. CURRENT FILING DATE: 2001-11-02 NUMBER OF SEQ ID NOS: 14 SEQ ID NO 3 LENTH: 1525 TYPE: DATE OF INVENTION: SEQUENCE TO SEQUENCE T	ORGANISM: Artificial Sequence FEATURE:	 	Query Match Best Local Similarity 100.0%; Pred: No. 0; Matches 1525; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	1 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT	_
										RESULT OF THE SULT		s,	Oue Bes Mat	Οÿ	ć

```
TO CHITINASES AND CHITI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1085
          GCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGT 1371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
GGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTG 1311
                                                                                                                                                                                                                                                                                                                                                                                                     725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                           785
                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                         CAAGCAGGCTTGTTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAA 1428
                                                                                                                                                                                                                                                                                                                                                                                                               TGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            846 TGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        966 AGAAGIGCCCTATAAGGCCAACGAGIGGCTIGGCTATGACAATATCAAGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAAGTGCCTTATGCCTATCAGGGCAATGTGTGGGTTGGCTATGACAACGTCAAGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                            TGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCCAGCTGAGAAGCTCATTGT
                                                                                                                                                                                                                                                                                                                                                                                  19;
                                                                                                                                                                       APPLICANT: ELIAS, JACK A
APPLICANT: ELIAS, JACK A
TITLE OF INVENTION: METHODS COMPOSITIONS AND KITS RELATING TO C;
TITLE OF INVENTION: MOLECULES AND INFLAMMATORY DISEASE
FILE REFERENCE: 044574-5107
CURRENT APPLICATION NUMBER: US/10/202,436A
CURRENT FILING DATE: 2002-10-17
PRIOR APPLICATION NUMBER: U.S. 60/307,432
PRIOR FILING DATE: 2001-07-24
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PATENTIN VEFSION 3.1
SEQ ID NO 14
                                                                                                                                                                                                                                                                                                                                hybridization probe
                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                               Score 430; DB 9; I
Pred. No. 7.8e-132;
O; Mismatches 165;
                                                                                                                                                                                                                                                                                                                                    situ
                                                                                                                                             Sequence 14, Application US/10202436A Publication No. US20030049261A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                    <del>1</del>2
                                                                                                                                                                                                                                                                                                                                    sense
                                                                                                                                                                                                                                                                                                                                                               28.2%;
llarity 76.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: AMCASE US-10-202-436A-14
                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial
                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
es 598; Conserv
                                                                                                                                     US-10-202-436A-14
                                                                                              1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1026
                  1364
                                      1312
                                                        1424
                                                                           1372
                                                                                                                                                                                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1086
                                                                                                                                                                                                                                                                                                        IYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                 Match
                                                                                                                                                                                                                                                                                                                                                                                                     999
                                                                                                                                                                                                                                                                                                                                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                Query Ma
Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
             8
                                     oy
Oy
                                                                                         පු
                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1141 TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT .1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCGAGCCAGTGACTACTCCTCC-----AGGAAGTGGGAGTGGGGGGTGGAAGCTCC 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             960
                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                780
                                                                                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                                                                               900
                                               300
                                                                 403
                                                                                     360
                                                                                                        463
                                                                                                                                              523
                                                                                                                                                                 480
                                                                                                                                                                                     583
                                                                                                                                                                                                       540
                                                                                                                                                                                                                          643
                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                703
                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                      763
                                                                                                                                                                                                                                                                                                                          TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGGACTGGTAGCAATGCCTAC 720
                                                                                                                                                                                                                                                                                                                                            823
                                                                                                                                                                                                                                                                                                                                                                                  883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGCGCCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 901 TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                           <u> ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA</u>
                                                                                                                                    ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                    TTCGGGACTGCCCTTTCACTGCCATGGTTTCTACTCCTGAGAACCGCCAGACTTTCATC
                                                                                                                                                                                                       GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                     TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
           ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTTC
                                                AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1201
         181
                           284
                                               241
                                                                 344
                                                                                    301
                                                                                                        404
                                                                                                                          361
                                                                                                                                             464
                                                                                                                                                                421
                                                                                                                                                                                    524
                                                                                                                                                                                                      481
                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                      704
                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                           764
                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                  824
                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                        884
                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                            ద
                                                                                                  g S
                                                                                                                                       셤
                                                                                                                                                            8 6 8 6 8 6 8 6
                                                                                                                                                                                                                                                                                                                         φ, g
                                                                                                                                                                                                                                                                                                                                                       3 6 6 6 6 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                      8
                                        ò
                                                                              õ
          à
```

Oy 203 CCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACA 262	Qy 263 GCAAACTGAAAACCCTCGGCAATTGGAGGTGGAACTTGGAACTGCTCTTTCACTA 322	OY 323 CCATGGTTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAATTTCTGC 382	QY 383 GTCAGTATGAGGGTTTGATGGACTGGACTGGACTGGGATACCCAGGCTCACGTGGGAGCC 442 DD 395 GGAACCATAACTTTGATGATGACTGGATGTAAGCTGGATCTACCCAGA	QY 443 CTCCTCAGGACAAGCATCTCTCTCTGTCGTGAAGGAAATGCGTGAAGCTTTTGAGC 502 DD 1 1 1 1 1 1 1 1 1 1	QY 503 AGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGTGGTGGGA 562	Qy 563 TITCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCC 622	QY 623 ATGTCATGACATATGACCTCCATGGAGGGCTACACTGGGAAAATA 676 1	OY 677 GTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTCAATGTGGATTATG 736	OY 737 TCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAG 796 1	. QY 797 AGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCT 856	Qy 857 CTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGGTGGGT	QY 917 TTTGCACCTTTCTGAGAGCCACCTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCCT 976	0y 977 angcctataaggccaacgagtggcttggctatgacaatatcaagagcttcagtgttaagg 1036 1	OY 1037 CTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTTGGCCATTGACCTTGATG 1096 1034 TTCAGTTCTTAAAGAATTTAAACCTGGGGGGTGCCTTGATTTGGTCTTTTGACATGTTG 1093	OY 1097 ACTICACTGGCTCTITCIGTGATCAGGGAAAATTTCCTCTGACTTGAACAAAG 1156	Oy 1157 CCCTTGGC 1164 Db 1154 GCCTTGGC 1161	RESULT 5 US-09-960-352-678 ; Sequence 678, Application US/09960352 : patent No HS200301313021
y 1146 TITGAACAAAGGCCTIGGCATAICCACIGAAGGTIGCACAGCTCCTGACGTGCCTTCCGA 1205	y 1206 GCCAGTGACTACTCCTCCAGGAAGTGGGGAGTGGGGGTGGAAGCTCCGGAGG 1256	y 1257 AAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTG 1309	/ 1310 TGGCAGATGACAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCA 1367	/ 1368 TIGICAAGCAGGGCTTGT-TITIGATACCAGCTGTAATTGCTGCAACTGGCCATGAACT 1426 11	7 1427 AA 1428 5 781 GA 782	SSULT 4 S-09-822-830A-402	US20020142952A1 US20020142952A1 FORMATION: Genetics Insti	APPLICANT: World, Gordon G. APPLICANT: Clark, Hilary APPLICANT: Fechtel, Kim APPLICANT: Agostino, Michael J.		FILE REFERENCE: GIN 6402 CURRENT APPLICATION FOREX: US/09/822,830A CURRENT APPLICATION NUMBER: US/09/822,830A DEFOR ADDITIONATION NUMBER: 05/01-03-29	FILOR FELLING NOMBER: 00/193,004 PRIOR FILING DATE: 2000-04-06 NUMBER OF SEQ ID NOS: 631 SOFTWARE: Patentin Ver. 2.0	DENOTH: 1391 TYPE: DNA ORGANISM: Homo sapiens	NAME/KEY: misc_feature LOCATION: 1353 OFHER INFORMATION: n=a,c,g, or t	Ouery Match 21.5%; Score 327.6; DB 10; Length 1391; Bast Local Similarity 58.1%; Pred. No. 1.1e-97; Matches 667: Concaruative 0. Manches 667: Indele 77. Cana 4.	CAGGTGAACTTGCTGCTGCATCTCAGCTGGGGGTCTGCCTACATCTGATTGCTATT 82	83 TCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACC 142	143 CCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCA 202

```
The Identification,
Ovarian Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        208 macaccagendereceagnaceggaaggegangggagengerneceagangecenngae 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       262 AGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTCAGTATGGGTTTGATGGACTGGACCTGGAATACCCAGGCTCACGTGGGAGC 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  202 ACCATAGAATGGAATGATGTTACTCTTTAAAAGCTTTCAATGACTTGAAAAACAGGAAC 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322 ACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         555 -- ACGGAGAGACAAACAGCATTTTÄCCACCCTAATCAAGGAAATGAAGGCCGAATTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 613 AAGGAAGCCCAGCCAGGGAAAAGC---AGCTCCTGCTCAGCGCAGCACTGTCTGCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTICCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22 ACAGGICIGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                502 CAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCACCCATGGCTTTGATGGGCTGGACCTTGCCTGGCTCTACCCTGG-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1925;
                                        Molecules and Proteins For Prevention, and Therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 319.6; DB 9;
Pred. No. 6.2e-95;
0; Mismatches 434;
                                                                                     CURRENT APPLICATION NUMBER: US/10/097,340
CURRENT FILING DATE: 2002-03-14
PRIOR PILLING DATE: 2002-03-14
PRIOR PILLING DATE: 2001-03-14
PRIOR FILING DATE: 2001-03-14
PRIOR PLICATION NUMBER: 60/225,149
PRIOR PLICATION NUMBER: 60/276,026
PRIOR APPLICATION NUMBER: 60/226,026
PRIOR PLICATION NUMBER: 60/224,967
PRIOR PLICATION NUMBER: 60/324,967
PRIOR PLICATION NUMBER: 60/311,732
PRIOR PELING DATE: 2001-08-10
PRIOR PELING DATE: 2001-08-10
PRIOR PELING DATE: 2001-09-26
PRIOR PELING DATE: 2001-09-26
PRIOR PELING DATE: 2001-09-26
PRIOR PELING DATE: 2001-09-26
                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 363
SOFWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 44
LENGTH: 1925
                                        TITLE OF INVENTION: Nucleic Acid TITLE OF INVENTION: Assessment,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21.0%;
nilarity 58.4%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                            FILE REFERENCE: MRI-030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: HO
US-10-097-340-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         442
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               염
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Mongbing
APPLICANT: Tao, Mongbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   253
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CIGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACCCCTGCCT 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GIGTACTCACCTGATCTATGCTGGGATGCAGAACAATGAGATCACCACCATAGA 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 CTGCACTCACCTGATCTATGCCTTCGCTGGGATGAGTAACAGTGAGATCACCACCATTGA 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         330 TTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCAAATTTCTGCGTCAGTA 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314 TGCCACTCCGGAGAACCGCAAGACTTTCATTTCTTCAGTCATCAAATTCCTACACCAGTA 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTCA 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATTTCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGT
                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                           DB 10; Length 449;
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                    ; TYPE: DNA
; ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 03-LIB34-081-Q1-E1-A11
US-09-960-352-678
                                                                                                                                                                                                                                                                                                   Query Match
21.5%; Score 327.2; DB 10;
Best Local Similarity 84.4%; Pred. No. 6.8e-98;
Matches 368; Conservative 0; Mismatches 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 44, Application US/10097340 Publication No. US20030087250A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: JOHN MONAHAN
APPLICANT: MANIJUA GANNAVARAPU
APPLICANT: Sebastian HOERSCH
APPLICANT: Shubhang! KAMATKAR
APPLICANT: Steve G. KOVATS
APPLICANT: Rachel E. MEYERS
APPLICANT: Rachel E. MEYERS
APPLICANT: Peter OLANDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peter VEIBY
Gordon B. MILLS
Robert C. BAST, Jr.
Karen LU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACAAGCATCTCTTC 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ami SEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-097-340-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                374
                                                                                                                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
nucleic acids, polypeptides
                                                                                                                                                                                                                                                                                                                                                                                      972 GACTTCCT---CCGCGGGGCCACAGTCCATAGAACCCTCGGCCAGCAGCAGCCCTATGCC 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         982 TATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAG 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1042 TGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGGGCCATTGACGTTGATGACTTC 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   171
                                                                                                                                                                                                  861
                                                                                                                                                                                                                                                                                 862 GATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGC 921
675 AGCATCATGACCTACGATTTTCATGCGCCTGGCGTGGGACCACAGGCCATCACAGTCCC 734
                                                                                                                                       912 CCGGGBATTCCAGGCCGGTTCACCAAGGAGCCAGGGACCCTTGCCTACTATGAGATCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113 TGGGGAGCTTCAAGCCTGATGAC-ATTAACCCCTGCCTGTGTACTCACCTGATCTATGCC
                                                                            735 CTCAGGCGAGGTCAGGAGGATGCAAGTCCTGACAGATTCAGCAACACTGACTATGCTGTG
                                                                                                                                                                                                                                                                                                                                                               922 ACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         187 CAGGAAAATTCACCCCTGAGGAATATTGACCCCTTCCTATGCTCTCATCTCATTTCA
                                        CTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATG
                                                                                                                    742 AACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTAT
                                                                                                                                                                                                  802 GGACACACCTTCATCCTGAGAACCCCTCTGATAATGGAATTGGTGCCCTACCTCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54 GGGGTCTGCCTACAATCTGATATGCTATTTCACCAACTGGG-CCCAGGTATCGGCCAGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                y Match 17.0%; Score 259.8; DB 10; Length Local Similarity 58.2%; Pred. No. 4e-75; hes 654; Conservative 0; Mismatches 437; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Searle/Monsanto
APPLICANT: Phippard, Deborah
APPLICANT: Phippard, Deborah
APPLICANT: Vasanthawaur, Geetha
APPLICANT: Dotson, Stanton
APPLICANT: Ma, Xiao-Jun
TITLE OF INVENTION: Osteoarthritis tissue-derived nuc;
TITLE OF INVENTION: vectors, and cells
FILE REFERENCE: SO-3221 PR
CURRENT APPLICATION UNMER: US/09/765, 231A
CURRENT FILING DATE: 2001-01-18
NUMBER OF SEQ ID NOS: 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1102 ACTGGCTCTTTCTGTGATCAGG 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application US/09765231A Patent No. US20020119452A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo sapiens
US-09-765-231A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-765-231A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 654
                                      682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                      g
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                        QQ
                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                      ò
                                                                          a
                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82 TTCACCAACTGGGCCCAGTATGGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAAC 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGGATGCAGAACAATGAGATCACC 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262 AGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTTTCACT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              506
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAAC 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                273 ACCTGGGAGTGGAATGATGTGACGCTCTACGGCATGCTCAACACACAACAACAACAAC 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             507 -----GACAAACACCATTTTACCACCCTAATCAAGGAAATGAAGGCCGAATTTATA 557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACAGGCTTTGTGGTCCTGGTGCTCCAGTGCTGCTCTGCATACAAACTGGTCTGCTAC 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                   GENERAL IN COURT.

GENERAL IN COURT.

APPLICANT: PRICE, PRUL
APPLICANT: JOHANSEN, JULIA
TITLE OF INVENTION: ASSAY FOR YKL-40 AS A MARKER FOR DECRADATION OF
TITLE OF INVENTION: AMAMALIAN CONECTIVE TISSUE MATRICES
FILE REFERENCE: 4077-8954134
CURRENT PRILING DATE: 1999-03-04
PRIOR FILING DATE: 1999-03-07
PRIOR PRILING DATE: 1993-07-09
PRIOR FILING DATE: 1994-07-09
PRIOR PRILING DATE: 1994-07-09
PRIOR FILING DATE: 1996-04-17
PRIOR APPLICATION NUMBER: US 08/581,527
PRIOR APPLICATION NUMBER: US 08/581,527
PRIOR SED ID NOS: 4
SOFTWARE: Patentin version 3.0
SEQ ID NO 4
LENTH: 1681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322 ACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   382 CGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             442 CCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    502 CAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGTAGCTGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    562 ATTICCAACAICCAGGCIGGCIAIGAGAICCCIGAACIIICIAAGIACCIGGATIICAIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     622 CATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGGAGAATAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22 ACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10; Length 1681;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches 439; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 311.6; DB : Pred. No. 2.6e-92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/09262213A
Patent No. US20020090658A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
Best Local Similarity 58.0
Matches 639; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-262-213A-4
                                 US-09-262-213A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          202
```

g ò 셤

ä

g ð a

à

g ò ద ò g à g

ò

g

g à

à

AND

ö 143

203 131 263

7.1

323

251

191

383

311

443

```
Sequence 13050, Application US/09960352
Sequence 13050, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICANT: Marren, Wesley C.
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND TITLE OF INVENTION: MSCLE AND FAT DEPOSITION
FILE REPERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 13112
SEQ ID NO 13050
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC AND AND OTHER MOLECULES ASSOCIATED WITH LACTATION INTILE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
FERROR OF SEQ ID NOS: 15112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 CAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84 CACCAACTGGGCCCAGTATCGGCCAGTCTGGGGAGCTTCAAGCCTGATGACATTAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                    12 CGCCATGGGCCCGGGATACCGGGAAGGTGATGGGAGCTGCTTCCCAGACGCCATCGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     144 CTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192 CAACCTGAAGACCCTCCTATCTGTTGGAGGATGGAACTTCGGTTCTCAAAGATTTTCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  324 CATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCCC
                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                    Length 415;
                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Bos taurus·
; OTHER INFORMATION: Clone ID: 12-LIB188-006-Q1-E1-C7
US-09-960-352-2589
                                                                                                                                                                                                                                                                                                                    Score 152.2; DB 10;
Pred. No. 1e-39;
0; Mismatches 133;
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 63.6%;
Matches 232; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  444 TCCTC 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       372 GCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
US-09-960-352-13050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCTATGATGATGAGAGATATGAGACCAAGGTTCAGTTCTTAAAGAATTTAAACCT 1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGAGGAGCCATGATCTGGTCTATTGACATGGATGACTTCACTGGCAAATCCTGCAACCA 1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAGATCACGCGCCTCCAGGATCAGCAGGTTCCCTACGCAGTCAAGGGGAACCAGTGGGT 1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            942 CACTGAGGTCTGGGATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCT 1001
                                                                                                                              GAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCC 349
                                                                                                                                                        882 TACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGC 941
                                                                                                                                                                                                       350 AGACCTICATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACC 409
                                                                                                                                                                                                                                                                                                                      531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            890 GGCCTCTGCAGAAACCACCGTGGGGGCCCCTGCTTGGCCCTGGAGCTGCTGGACCCAT 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649 TCCTGGGA-----GGGCTACACTGGGGAGAATAGTCCT-CTTTACAAATACCCTACTGA 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             881
                                                      TAAAGCTTTCAA-TGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTG
                                                                                         CCAGACCATCAACAGTTCTCAAAACCAAGAATCCCAAACTGAAAATTCTCTTGTCCATTG
                                                                                                                                                                                                                              TGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCAGGACAAGCATCTTCACTG
                                                                                                                                                                                                                                                                                                                  TAAGCTGGATCTACCCAGA------TCAGAAAGAAAACACTCATTTCACTG
                                                                                                                                                                                                                                                                                                                                                       470 TCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     589 ATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACTGGTAGCAATGCCTAACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAGGCCAAGCTCCTACTACAATGTGGAATATGCTGTGGGGTACTGGATACATAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         322 AAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTA
                                                                                                                                                                                                                                                                                                                                                                                         532 TGCTGATTCATGAGTTAGCAGAAGCCTTTCAGAAGGACTTCACAAAATCCACCAAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                GACTGATGGTTACTGC - TGCTGTAGCTGGTGGGATTTCCAACATCCAGGCTGGCTATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              832 AATGCCATCAGAGAAGGTGGTCATGGGCATCCCCACATATGGGGCA--CTCCTTCACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1002 TGGCTATGACAATATCAAGAGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1062 IGGAGGIGCCAIGATCIGGGCCATIGACCIIGAGACTICACIGGCICITICIGIGAICA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCCCTTACCCTCTTGTCCAAGCAGTCAAGAGAAGCCTTGGC 1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGAAAATTTCCTCTGACTTCTACTTTGAACAAAGCCCTTGGC 1164
                                                                                                                             290
                                                                                                                                                                                                                                                                               410
                                                                                                                                                                                                                                          427
                                                                                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                                                                                                                                                                                530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   762
                                                                                                                              à
                                                                                                                                                              g
                                                                                                                                                                                                     à
                                                                                                                                                                                                                                      qq
                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
```

ö

Gaps

ö

Indels

414;

Length

Score 149.6; DB 10; Pred. No. 7.4e-39; 0; Mismatches 124;

Query Match 9.8%; Best Local Similarity 64.4%; Matches 224; Conservative

ORGANISM: Bos taurus OTHER INFORMATION: Clone ID: 56-LIB188-019-Q1-E1-F8 09-960-352-13050

US/09960352

Sequence 2589, Application Patent No. US20020137139A1

RESULT 10 US-09-960-352-2589

GENERAL INFORMATION:
APPLICANT: Warren, Wesley
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.

```
Sequence 3057, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Mongbing
APPLICANT: Byat, John C.
APPLICANT: Byat, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLELE AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICANTION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MOSCAF-21(10299)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001.09-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCC 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 TGACGCTCTATGACACACTGAACACTCAAGAACAGGAACCCCAACCTGAAGACCTTC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 GGAGTCGCAGGACTTTCATCAAGTCGGTGCCACCATTTCTGCGGACCCATGGCTTTGATG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161 TGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGAATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACTGGACCTAGCCATGCCTCTACCCCGGGTGGAGAGACAAGCGGCATC 348
 301 GACTGGACCTAGCATGGCTCTACCCCGGGTGGAGAGACAAGCGGCATC 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401 GACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTC 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 148; DB 10; Length 4
Pred. No. 2.6e-38;
0; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
OGANISM: Bos taurus
CTHER INFORMATION: Clone ID: 14-LIB188-002-Q1-E1-D5
US-09-960-352-3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 3072, Application US/09960352 Patent No. US20020137139A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 15112
SEQ ID NO 3072
LENGTH: 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 64.1
Matches 223; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Bos taurus
                                                       RESULT 13
US-09-960-352-3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
US-09-960-352-3072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Warren, Wesley C.
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REPRENCE: 16511.006/37-21(10299)
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT APPLICATION DATE: 2001-09-24
SEQ ID NO 7364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                        220
                                                                                                          120
                                                                                                                                               280
                                                                                                                                                                    341 AGAACGGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATG 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTC 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       341 AGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATG .400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTC 340
                                                                                                                                                                                                                                                                                                                             241 GGAGTCGCAGGACTTTCATCAAGTCGGTGCCACCATTTCTGCGGACCCATGGCTTTGATG 300
9
                     TGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGAATGATG
                                                                                                                                             TTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGGGAGGGTGATGGGAGCTGCTTCCCAGACGCCATCGACCCCTTCCTGTGCACCCATG
                                                                                                                                                                                                                                                      181 TATCTGTTGGAGGATGGAACTTCGGTTCTCAAAGATTTCCAAGATAGCTTCCAAGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161 TGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAAACCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                      GACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTC 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTC 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) ORGANISM: Bos taurus
; OTHER INFORMATION: Clone ID: 32-LIB188-023-Q1-E1-H11
US-09-960-352-7364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 148; DB 10;
Pred. No. 2.5e-38;
0; Mismatches 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7364, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 9.7%;
Best Local Similarity 64.1%;
Matches 223; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-960-352-7364
                                                                      161
                                                                                                                                           221
                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                  셤
                                                                                                       g
                                                                                                                                                                           g
                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
ŝ
                                                                      à
                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                   ð
```

```
440 GCCCTCCTC 448
                                                                                                                                                           completed: July
ne: 269.722 secs
                                                                                                               66
                                                                                                                                                                             time
                                                                                                                                                               Search
Job tim
                                               рp
                     õ
                                                                                ò
                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 265, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
RAPLICANT: Warren, Wesley C.
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
TITLE OF INVENTION: MUSCLE AAD FAT DEPOSITION
TITLE OF INVENTION: MUSCLE AD FAT DEPOSITION
CURRENT APPLICANTON NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
LENGTH: 399
                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                        160 CTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAATGGAATGAT 219
                                                                                                                                                                                                                                                         250
                                                                                                             220 GTTACTCTTATAAAGCTTTCAATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTC 279
                                                                                                                                                                                                                                                                                                     280 CIGGCAATIGGAGGCIGGAACITIGGAACIGCICCITITCACIACCAIGGITITCCACITCT 339
                                                                                                                                                                                                                                                                                                                                                                  340 CAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGAT 399
                                                                                                                                                                                                                                                                                                                                                                                    140 ACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCA 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260 ACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCA 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCCCAACCTGAAGACCCTCCTATCTGTTGGAGGATGGAACTTCGGTTCTCAAAGATTTT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             320 CTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTC 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAGATAGCTTCCAAGACCCAGAGTCGCAGGACTTTCATCAAGTCGGTGCCACCATTC 160
                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                    11 TACCGGGAGGATGATGGGAGCTGCGTCCCAGACGCCATCGAGCCCTTCCTGTGCACCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200 CCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                  Gaps
                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ő
                                                                                                                                                                                                                                                                                                                                                                                                                                               311 GGACTGGACCTAGCATGCCTCTACCCCGGGTGGAGAGAACAAGCGGCATC 359
                                                                                                                                                                                                                                                                                                                                                                                                                               400 GGACTGGACCTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTC 448
                                                  Length 418;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 136.2; DB 10; Length
Pred. No. 2.1e-34;
0; Mismatches 108; Indels
                                                                              0; Mismatches 126; Indels
; OTHER INFORMATION: Clone ID: 14-LIB188-015-01-E1-D5 US-09-960-352-3072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: BOS taurus
; OTHER INFORMATION: Clone ID: 02-LIB188-020-Q1-E1-A5
US-09-960-352-265
                                               Score 147.4; DB 10;
Pred. No. 4e-38;
                                               9.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8.9%;
65.0%;
                                                                              Matches 223; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Mátch
Best Local Similarity 65¦(
Matches 201; Conservative
                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            us-09-960-352-265/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                             ò
                                                                                                                                         g
                                                                                                                                                                          ò
                                                                                                                                                                                                      g
                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŏ
```

```
380 raccarcagarargaragacagacagacagacagagaaracccaggcacacaga 439
```

AGCGGCATC 91

3, 2003, 10:57:25

```
BG855848 602788264
BG872805 602793925
BG8710376 602793925
BG8710376 602791269
BG87578 602781269
BG87578 602781269
BG87578 602781269
BG87144 602782982
BG867144 602782982
BG88463 602782982
BG88463 602782982
BG870392 602791292
BG870392 602791292
BG870496 602791891
BG87046 60279130
BG87046 60279130
BG87046 60279131
BG877488 60279131
BG87748 60279131
BG87748 60279131
BG87748 602791431
BG87748 602791431
BG87748 60279425
BG86766 602784229
BG87749 602784423
                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus adult male stomach cDNA, RIKEN full-length enriched library, clone:2200003E03:chitinase, acidic, full insert sequence. AK008633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genes
                                602789716
602790678
602789826
                                                        602786605
602785352
602790509
602793973
                                                                                          602784345
602793390
603290028
                602787570
602792974
                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone:2200003E03.
Was musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)

20499374

11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                        BG871337
BG872850
BG865756
BG870147
BI664452
                                                                                                                                                                                                                                                                                                                                                                                                                              AKOO8633.1 GI:12842941
HTC; CAP trapper.
HTCs cas uscalus (strain:C57BL/6J) adult male stomach CDNA (schone_lib:RIKEN full-length enriched mouse cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
9927923
10349636
                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                  BG868956
BG865815
                BG868741
 785
784.6
                                                                                          783
776.6
7775.4
7775.4
7774.6
7774.2
7772.4
7712.4
771.2
7713.4
7713.4
7713.4
7713.4
7763.8
765.8
762.8
                                                                                                                                                                                                                                                        759.8
759.8
759.8
759.2
759.2
757.8
757.8
829.4
823.6
801.4
801.2
796.2
794.6
789.8
                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
AK008633
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                 AK008633 MUS MUSCU
AK008757 MUS MUSCU
AK008650 MUS MUSCU
AK007573 MUS MUSCU
BQ231098 AGENCORT
AV072529 AV072529
                                                                 (without alignments)
10799.277 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                         ; Search time 2287.02 Seconds
                                                                                                          ......taaaattggtagccaaaaca
       5.1.6
Compugen Ltd
                                                                                                                                                                   hits satisfying chosen parameters:
                                                                                                                                                    16154066 segs, 8097743376 residues
        version:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK008633
AK008757
AK008650
AK007573
BQ231098
AV072529
                                       nucleic search, using sw model
                                                       3, 2003, 04:32:16
                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                           1 atggccaagctacttctcgt.
       GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_other:*
em_gss_pro:*
                                                                                                                                                                                    length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                 gb_est2:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est5:*
em_estfun:*
                                                                                                                                                                                                                                                                                                                                                                                                     em_gss_hum:*
                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_inv:*
                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_vrt:*
em_gss_fun:*
                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_mam:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_gss_mus:*
                                                                                                                                                                                                                                                                                                                                                                                                                     em_gss_pln:*
                                                                                         US-10-004-219B-3
1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           042777
                                                                                                                                                                                                                                                       em_estba:*
em_esthum:*
em_estin:*
em_estin:*
                                                                                                                                                                                                                                                                                        em_estov:*
em_estpl:*
em_estro:*
em_htc:*
gb_estl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              em_gss_rod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>0</u>3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1533
1535
1534
1530
892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                             gb_gss:
                                                                                                                                                                                                                                                EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.2
99.0
97.6
96.1
56.5
                                                        July
                                                                                                                                                                    Total number of
                                                                                                                                                                                    DB sed DB sed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1512.2
1510
1488.6
1465.8
861.2
851.6
                                                                                                   score:
                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                       nucleic
                                                                                                           Sequence:
                                                                                                                                                    Searched:
                                                                                                                                                                                                                                               Database
                                                                                         Title:
Perfect :
                                                                                                                                                                                    Minimum
                                                                                                                                                                                              Maximum
                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š.
```

```
/poctedin_1d="BAB25795.1"
/db_xref="GI:12842942"
/db_xref="GI:12842942"
/db_xref="GI:12842942"
/db_xref="GI:12842942"
/db_xref="GI:12842942"
/db_xref="MGI:1932052"
/translation="MakLityTightLithAqQLGSAYNLICYFTHWAQYRPGLGSFKPD
DINPCLCTHLIYAFAGMQNNEITTIEWNDYTLYRAFNDLKNRNSKLKTLLAIGGWNFG
TAPFTHWSTSQWRQYFITSYTKFLRQYGFDGLDLDMSFPGSSRSPPQNKHLFTVLVK
EMBEAFEQEAIESNRPLMYTAAVAGGISNIQAGYEIPELSKYLDFIHVMYTLLNGSW
EGYTGENSPLYKYPPEGSARAYLNVDYVWNYWRNNGAPAEKLIYGFPEYGHTFILRNP
SDMGIGAPPSGPAGPYTRQAGFRAXYYEICTFLRSGATEWNDASQBYPYAYKANEWL
GYDNIKRSVKAQWLKQNNFGGAMIWAIDLDDFTGSFCDGKFPLTSTLNKALGISTE
GCTARDVPSEPVTTPPGSGSGGSGGSGGSGGSGGSGGSGGGTARAAGGING
ITYQOHCQAGLVFDTSCNCCNWP"
                                                                                                                                                                                                       /tissue_type="stomach"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGACTTGAAAAACAGGAACAGCAAACTGAAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             377 ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481 GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                             data source: MGD, source key: MGI:1932052, evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1533;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11;
                                                                    /strain="C57BL/6J"
/db_xref="FANTOM_DB:2200003E03"
/db_xref="MGD:MGI:1892888"
/db_xref="taxon:10090"
/clone="220003E03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1512.2;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                17. [1438]
/note="chitinase, acidic
                                                    /organism="Mus musculus"
         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="putative" 1533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 99.8
Matches 1514; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                            S Adachi.J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baladrelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itch, M., Izawa, M., Kosuka, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Saato, R., Sakai, C., Sakai, K., Shinagawa, A., Sano, H., Saato, R., Shinagawa, A., Takahashi, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I., Yasulishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences. Center (GSC), RIKEN EXIEN Yokohama Institute; 1-7-22 Suehlro-cho, Tsurumi-ku, Yokohama, Ranagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, UKL.ittp://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakayuchi, S., Ikegami, T., Kashiwaqi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watshiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipelihe with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax:81-45-503-9216)
Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                         11076861
                                                                                                                                                                                                                                      20530913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1121785
                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
REFERENCE
AUTHORS
    AUTHORS
                                                                                                                                                                                                                                      MEDLINE
                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                         PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
```

ö

120 136 180 196 240 256 300 316 360 376 420 436 480 496

9/

57 AK008757 15	NO N	S HTC: CAP trapper. Mus musculus (strain:C57BI clone_lib:RIKEN full-lengt clone:2210020M23.	SM	1 Carninci, P. and Haya	High-efficiency full-lengt MAL Meth. Enzymol. 303, 19-44 NE 99279253		Normalization and subtract prepare full-length cDNA J AL Genome Res. 10 (10), 1617. NE 20499374		Sumi, N., Ishii, Y., Nakamuı Vamamoto, R., Matsumoto, H., Fujiwake, S., Inoue, K., Too Yoneda, Y., Ishikawa, T., Oo	Okazaki,Y., Muramatsu,M., E. RIKEN integrated sequence sequencing pipeline with 3 NAL Genome Res. 10 (11), 1757-		Arakawa,T., Hara,A., Fukur Aizawa,K., Izawa,M., Nishi Saito,T., Okazaki,Y., Gojd Kadota,K., Matsuda,H., Asi	Fleischmann, W., Gaasterlar Kuehl, P., Lewis, S., Matsuc Quackenbush, J., Schriml, L. Wagner, L., Washio, T., Sak	Baldarelli, R., Barsh, G., F Carninci, P., de Bonaldo, M Fletcher, C., Fujita, M., Ga Hofmann, M., Hume, D.A., Kan	Marchionni, L., Mashima, J., Ring, B., Ringwald, M., Rodh Sato, K., Schonbach, C., Sey Toyo-oka, K., Wang, K.H., We			Arakawa,T., Baldarelli,R., Carninci,P., Fukuda,S., R. Hara,A., Hayatsu,N., Hill, Hume,D., Imotani,K., Ishil, Kato,H., Kawai,J., Kojima,
AK0087: LOCUS	DEFINITION ACCESSION VERSION	SOURCE	ORGANI	REFERENCE	TITLE JOURNAL MEDLINE	PUBMED REFERENCE AUTHORS	TITLE JOURNAL MEDLINE	PUBMED REFERENCE AUTHORS		TITLE	MEDLINE PUBMED REFERENCE AUTHORS					TITLE	MEDLINE PUBMED REFERENCE AUTHORS	
.	541 ACTGCTGCTGTAGCTGGTGGGATTTCCAACATCCAGGCTGGCT	601 TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGC 660	TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGGCTGGTAGCAATGCCTAC	TACACTGGGGAGAATAGTCCTTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC	721 CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC 780 	781 ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA 840 	841 ATTGGTGCCCTACCTCTGGTGATGGCCCTGGTGGGCCTATACCAGACAGGCTGGGTTC 900	901 TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC 960 	961 TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG 1020 	1021 AGCTICAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTITGGAGGTGCCATGATCTGG 1080 	1081 GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT 1140 	1141 TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT 1200 	1201 TCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGAGGTGGGGAGGTGCGAAGCTCCGGAGGAAGC 1260 	1261 TCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGAC 1320 	1321 AGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAAGCAGG 1380 	1381 CTTGTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCC 1440 	1441 AGAAATTTCTGCACTCTCCTTTACTCCTCACAAAGTAACTATCTTCCCTTTAACCTTA 1500 	1501 TGCAATAAATTGGTAG 1517
පි	ç d	ò a	δ	qa .	d d	S G	6 G	Q Q	Q P	0y 0p	oy a	Q P	9 9	S A	è e	S G	S S	o g

NACONGYST

NACONGYST

NACONGYST

AND THE STATEM THE STORE AND THE STORE

```
AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                         421 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                            TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    617 TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                677 TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCCAATAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1037 AGCITCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                       TTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTTGCTGGG
                                                                                            ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                      AATGACTTGAAAAACAGGAACAGCAAACTGGAAAACCCTCCTGGCATTGGAGGCTGGAAC
                                                                                                                                                                                                                                            TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                     ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481 GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781 ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCTTCAGTGTTAAGGCTCAGTGGCTTAAGCAGAACAATTTTGGAGGTGCCATGATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTTCCTCTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           797
                                                                                                                             197
                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                    377
                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      211
                     121
                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                      g
                                                                                          ò
                                                                                                                         g
                                                                                                                                                                                                     g
                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                            q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ·õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δý
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                        Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.

Genomic Sciences Center and Genome Science Laboratory in RIKEN.

Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. First strand cDNA was primed with a primer [5' AGAGAGAGAGAGACTOTTTTTTTTTTTTTVN 3'), CDNA was prepared by using trebalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. CDNA went truough one round of normalization to Rot = 5.0 and subtraction to of sequence [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /procedil_id="BAB25878.1"
/db_xref="G1:12843149"
/db_xref="G1:12843149"
/db_xref="G1:12843149"
/translation="WonNeITTIEWNDYILYKAFNDLKNRNSKLKTLLAIGGWNFGTAPTTIEWSTSQNRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDKHLFTVLVKEWSTSGNRQTFITSVIKFLRQYGFDGLDLDWEYPGSRGSPPQDKHLFTVLVKEWSTSGNRQTFITSVIKFLSTSRPRAWYTSTSGNRAVANGGESTSNIQAGSTSTDFLSKYLDFIHVMTYDLHGSWRGYTGRNRSPLYKYPTGSNRYLNVDYWNNYKRNNGAPAEKLIYGFPEYGHAFILRNPSDNGIGAPTSGDGPAGPYTRQAGFWAYYEICTFLRSGATEVWDASQ"
                                                                                                        Direct Submission Submission Submitted (10-JUU-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemond. Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanaqawa 230-0045; Japan (E-mail:genome-reségsc.riken.go.jp, INR:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cleaved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="stomach"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 AIGGCCAAGCIACTICICGICACAGGICIGGCTCTICIGCIGAAIGCICAGCIGGGGICI
                                                                                                                                                                                                                                                         Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                key:MGI:1932052, evidence:ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Schriml, L., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T. Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref_"FANTOW_DB:2210020N23"
/db_xref="MGD:801:1894239"
/db_xref="taxon:10090"
/clone="2210020N23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1510; DB
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       data source: MGD, source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualiflers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      373 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197.<sup>-</sup>.985
/note="chitinase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="putative"
1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="C57BL/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.0%;
ilarity 99.7%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. 1535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 1513; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNT
                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE CC
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŏ
```

1020 1036 1080 1096 1140 1216

쉽 à 셤 õ g à 셤 à g ò

```
Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Kato, H., Kawai, J., Kojima, Y., Kondo, M., Koya, R., Kato, H., Kawai, J., Kojima, Y., Kondo, M., Koya, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, Saito, H., Saito, R., Sakai, C., Sano, H., Sasaki, D., Schriml, L., Shibata, K., Shibata, Y., Shinagawa, A., Shiraki, T., Tanaka, T., Tajama, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yasunishi, A., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Quackenbush, J., Schriml, L.M., Staubil, F., Suzuki, R., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Boffelli, D., Bolunga, N., Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D.A., Kamiya, M., Gee, N. H., Lyons, P., Marchlonni, L., Mashida, M., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Toyo-oka, K., Wang, K.H., Weltz, C., Whitaker, C., Wilming, L., Waynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploratory Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, Tal:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="stomach" /clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              data source:MGD, source key:MGI:1932052, evidence:ISS"
/db_xref="MGD:MGI:1932052"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                    Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
Pesole, G.,
  Matsuo, Y., Nikaido, I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref-"FANTOM_DB:2200008LJ7"
/db_xref-"WOD100511894268"
/db_xref-"taxon:10090"
/clone="2200008LJ7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dew_stage="adult"
1. 1534
/note="chitinase, acidic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism-"Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 1534)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="male'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                             AKOU8650
Mus musculus adult male stomach CDNA, RIKEN full-length enriched library, clone:2200008L17:chitinase, acidic, full insert sequence. AK008650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishili, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                            1321 AGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCAGTTGTCAAGCAGGG 1380
                                                                                                                                                                                                                                                        CITGITITIGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCC 1440
                                                                                                                                                                                                                                                                                                                                                                          1397 CTIGITITIGATACCAGCIGTAATTGCTGCAACTGGCCATGAACCTAATGCCATTCTTCC 1456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           genes
TCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGGAGTGGGGGGTGGAAGCTCCGGAGGAAGC 1260
                                                                                                              1261 TCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGAC 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kawai,J., Shinagawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Azakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Aizawa,K., Izawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
Saito,T., Okazaki,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R.,
Kadota,K., Matsuda,H., Ashburner,M., Batalov,S., Casavant,T.,
Fleischmann,W., Gaasterland,T., Gissi,C., King,B., Kochiwa,H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi;
Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (strain:C57BL/6J) adult male stomach cDNA to mRNA, clone_lib:RIKEN full-length enriched mouse cDNA library clone:2200008Ll7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new g
Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P. and Hayashizaki, Y.
High efficiency full-length cDNA cloning
Weth. Enzymol. 303, 19-44 (1999)
99270253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAATAAAATTGGTAGC 1518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1517 TGCAATAAATTGGTAGC 1534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK008650.1 GI:12842971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalla; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1076861
1201
                                                                                                                                                                                                                                                                                                                                            1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 3
AK008650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
```

a

oka,S., Sasaki,N., Carninci,P., unai,T., Tashiro,H., Ifoh,M., ma,N., Nishine,T., Harada,A., S., Ikegami,T., Kashiwagi,K., awa,M., Ohara,E., Watahiki,M., naka,T., Matsura,S., Kawai,J., Kira,A. and Hayashizaki,Y. ATACCAGCAGCATTGTCAAGCAGGG 1380 GCCATGAACCTAATGCCATTCTTCC 1440 GGTTGCACAGCTCCTGACGTGCCT 1200 AGTAACTATCTCCCTTTAACCTTA 1500 A linear HTC 19-JAN-2002 cDNA, RIKEN full-length tinase, acidic, full insert Sugahara,Y., Shibata,K., Lsu,M. and Hayashizaki,Y. Lrapper-selected cDNAs to r rapid discovery of new genes a; Vertebrata; Euteleostomi; nathi; Muridae; Murinae; Mus. old male pancreas cDNA to ched mouse cDNA library ng

```
/tissue_type="pancreas"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC 120
                                                                                                                                                                                    data source:MGD, source key:MGI:1932052, evidence:LSS"
/db_xref="MGD:MGI:1932052"
| 384 c 370 g 399 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721 CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17 ATGCCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 TTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 256 AATGACTIGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATIGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301 TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               316 TITGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               556 ACTGCTGTAGCTGTGGGGTTTCCAACATCCAGGCTGGCTATGAGATCTCCTGAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601 TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661 TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781 ATTGTTGGATTCCCAGAGTATGGACACCTTCATCCTGAGAAACCCCTCTGATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                        ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCTCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1530
                                                                                                                                                                                                                                                                                                                                                         ..
S
                                                                                                                                                                                                                                                                                                                                                         2; Indels
                                                                                                                                                                                                                                                                                                               DB 11;
                                                                                                                                                                                                                                                                                                       Score 1465.8;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                              /dev_stage="10 day old"
1. 1530
/note="chitinase, acidic
  /db_xref="taxon:10090"
                        /clone="1810021D23"
                                                                                                                                                                                                                                                                                                          Query Match 96.1%;
Best Local Similarity 99.5%;
Matches 1512; Conservative
                                                 /sex-"male"
                                                                                                                                                                                                                                     377
                                                                                                                                               misc_feature
                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                             Kawai, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Arakawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W., Gasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Kochiwa, H., Wagner, L., Washlo, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Boffelli, D., Bolunga, N., Carninci, P., de Bonaldo, M. F., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Marchlonni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Tyopo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Horli, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Koyaka, T., Kato, H., Kawai, J., Kojima, Y., Koudo, M., Kouda, M., Koyaka, K., Kurihara, C., Matsuyama, T., Mayazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Salto, H., Saito, R., Shibata, Y., Sakai, K., Sano, H., Sasaki, D., Schriml, L., Shibata, K., Shibata, Y., Shibata, Y., Shibata, Y., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, WaR.:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Please visit our web site (http://genome.gsc.riken.go.jp/) for
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="FANTOM_DB:1810021D23"
/db_xref="MGD:MGI:1892862"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .1530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  further details.
                                                                                             11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11217851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                 REFERENCE
AUTHORS
                                                                     MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                              JOURNAL
                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
LITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
```

92 9

Gaps

909

615 99 675 720 735 780 795 855

g ö 8 ð පු g

ò

셤

δ

g ò QQ ò 셤

ò

```
1. .892
                                                                                                                                                                                                         1 Similarity
869; Conserv
                                                                                                                                                              ø
                                                                                                                                                                                              Query Match
Best Local S
Matches 869
                                                                                                                                                                                                                                           29
                                                                                                                                                                                                                                                                                                                                                                                 209
                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                              269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                            BASE COUNT
ORIGIN
                                    FEATURES
                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                          1020
                                                                                                                                  1331
                                                                                                                                                                                                                                                                                                                                                                                                              1441 AGAAATTICIGCACICTCCTTTACICCTCACCAAAAGIAACTATCTICCCTTTAACCTTA 1500
                                                                                                                                                                                                                                                                                                                      TCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTGGCAGATGAC 1320
                                                                                                                                                                                                                                                                                                                                                                    AGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGTCAAGCAGGG 1380
                                                                                                                                                                                                                                                                                                                                                                                EST 02-MAY-2002
                                             960
                     911
                                                                   971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       house mouse.

Was musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
1 (bases 1 to 892)
1 (hases to 892)
1 National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                               GCCATTGACCTTGATCACTTCACTGGCTCTTCTGTGATCAGGGAAAATTTCCTCTGACT
ATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGCGCCTATACCAGACAGGCTGGGTTC
          --TGGTGCCCCTACCTCTGGTGAT-GCCCTGCTGGC-CCTATACCAGACAGGCTGGGTTC
                                            TGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTCTGGGATGCC
                                                       TCCCAAGAAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGACAATATCAAG
                                                                                                    TCCGAGCCAGTGACTCCTCCAGGAAGTGGGAGTGGGGGTGGAAGCTCCGGAGGAAGC
                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bloscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                              TCTACTTIGAACAAAGCCCTIGGCATATCCACTGAAGGTTGCACAGCTCCTGACGTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGENCOURT_7578138 NCI_CGAP_St1 Mus musculus cDNA clone IMAGE:6051580 5', mRNA sequence.
BQ231098.1 GI:20412498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1501 TGCAATAAATTGGTAGCC 1519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1092
                                                                                                                                                                                                                                                   1152
                                           901
                                                                  912
                                                                                                              972
                                                                                       961
                                                                                                                                                                                1081
                                                                                                                                                                                                                              1141
                                                                                                                                                                                                                                                                          1201
                                                                                                                                                                                                                                                                                                 1212
                                                                                                                                                                                                                                                                                                                      1261
                                                                                                                                                                                                                                                                                                                                                                   1321
                                                                                                                                                                                                                                                                                                                                                                                          1332
                                                                                                                                                                                                                                                                                                                                                                                                                                     1392
                                                                                                                                                                                                                                                                                                                                            1272
                                                                                                                                                                                                                                                                                                                                                                                                                1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 5
BQ231098
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
```

g

à

셤

õ

qq

ò

ò

```
/organism="Mus musculus"
/db_xref="taxon:10090"
/dclone="lmAGE:6051580"
/clone_lib="NLGGAP_Stl"
/lab_host="DHIOB (Ti-resistant)"
/note="Organ: stomach; Vector: pcWV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.77 kb. Library constructed by Life Technologies. Note: this is a NCI_CGAP Library."

a . 226 c 216 g 230 t l others
                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                         148
                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                     208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATTTCACCA
                                                                                                                                                                                                                                                                                                                                                                                       89 ACTGGGCCCAGTATCGGCCAGGTCTGGGGAGCTTCAAGCCTGATGACATTAACCCCTGCC
                                                                                                                                                                                                                                                                                                                                                                                                       TGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   149 TGTGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCCTACAATCTGATATGCTATTTCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATGGAATGATGTTACTCTCTATAAAGCTTTCAATGACTTGAAAAACAGGAACAGCAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 TGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGACAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATT
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                 892;
                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                               Score 861.2; DB 14;
Pred. No. 2.7e-254;
0; Mismatches 14;
                02
http://image.llnl.gov
Plate: LLAM13305 row: k column:
High quality sequence stop: .772.
                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                              56.5%;
ilarity 98.4%;
Conservative
```

```
/db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                   primer [5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best_Local
Matches 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

I (bases 1 to 1007)

Sarakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A.,

Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J., Konno,H., Kouda

,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M.,

Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki
,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H.,

Tagami,M., Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T.,

Muramatsu,M. and Hayashizaki,Y.

RIKEN Mouse ESTS (Arakawa,T., et al. 2001)

On Jun 24, 1999 this sequence version replaced gl:5192357.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RİKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. .10 (11), 1757-1771 (2000) (11), LYS7-1771 (2000) (11), LYS7-1771 (2000) (11), LYNUNISHIY, Shibata, K., Itoh, M.,.Carninci, P., Sugahara, Y. and Hayashizaki, Y. Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo,S., Shinagawa,A., Saito,T., Kiyosawa,H., Yamanaka,I., Aizawa,K., Fukuda,S., Hara,A., Itoh,M., Kawal,J., Shibata,K. and
                                                                                                                                                                                                                                                                                                                                AV072529 1007 bp mRNA linear EST 24-OCT-2001 AV072529 Mus musculus stomach C57BL/6J adult Mus musculus cDNA clone 2200004B09, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             URL:http://genome.gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp,
Carninci.p., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
A., Konno,H., Okazaki,Y., Mramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
penese Genome Res. . 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yoshihide Hayashizaki Laboratory Rikel Genomic Sciences Center (GSC), Yokohama Institute of Physical and Chemical Research (RIKEN)
The Institute of Physical and Chemical Research (RIKEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                  Hayashizaki,Y. Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
   CCTTCATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTGATGGCC
                                                                                                                                                   869 CTGCTGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AV072529.2 GI:16380963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
809
                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                       RESULT 6
AV072529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                           g
                                                                                                                    8
                                                                                                                                                                            8
   8
```

/organism="Mus musculus"

source

```
T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT773 vector. RNA provided by Dr. Minoru Ko, Wayne State Univ. Library constructed and normalized by Bento Soares and M.Fatima Bonaldo."
                                                                                                            /note="Organ: mammary gland; Vector: pT7T3D-Pac (Pharmacia ) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was primed with a Not I - oligo(dT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTG 1311
                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGATGCCTCCCAAGAGTGCCCTATGCCTATAAGGCCAACGAGTGGCTTGGCTATGAC 1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1072 ATGATCTGGGCCATTGACCTTGATGACTTCACTGGCTCTTTCTGTGATCAGGGAAAATTT 1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACGTGCCTTCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGAGTGGGGGGTGGAAGCTCC 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  321 -ATAATGGAATT-GTGCCCCTACCTCTGGTGATGGCCCTGCTGGGCCCTATACCAGACAG 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            379 GCTGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTC 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          652 TGGGAGGCTACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCTGACTTCTACTTTGAACAAAGCCCTTGGCATATCCACTGAAGGTTGCACAGCTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGAAGCTCTGGAGGCAGTGGATTCTGTGCCGACAAAGCAGATGGCCTCTACCCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      592 CCTGAACTITCTAAGTACCTGGAITTCATCCATGTCATGACATATGACCTCCATGGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   712 AATGCCTACCTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATAATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGCCGCCTATACCAGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAGAAGTGGAGCCACTGAGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGTGCCTTCCGAGCCAGTGACTACTCCTCCAGGAAGTGGGGAGTGGGGGTGGAAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                             adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                            55.8%; Score 851.6; DB 9; Length 1007; 98.3%; Pred. No. 2.7e-251;
                           stomach C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11; Indels
                                                                                                                                                                                                                                                                                                                                                              270 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
/clone="2200004B09"
/clone_lib="Mus musculus
/sex="male"
                                                                       /tissue_type="stomach"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                           243 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

8 ö g ò Q

g à

```
720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      838 bp mRNA linear EST 29-MAY-2001
Mus musculus cDNA clone IMAGE:4912544 5',
                 240
                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                           900
                                                                                                                  304
                                                                                                                                                      360
                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                      484
                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                           544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                       364
                                                                                                                                                                                                                                                                                                                                                                                                                                                           604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            665 TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC 784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 838)
                                                                                                                                                    425 TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                 181 ATGCAGAACAATGAGATCACCACATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                     241 AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                    ACCTCAGTCATCAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACTGGACTGGGAAATTCTTGCGTCAGGAAATTTCTGCGTCAGTATGGGTTTGATGATGACTGGACTGGACTGGAAATTTCTGCGTCAGTATGGGTTTGATGATGATGACTGGACTGGACTGGAAA
                                                                                                                                                                                                                                                                                          TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                             CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                               GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781 ATTGTTGGATTCCCAGAGTATGGACACA-CCTTCATCCTGAGAAACCCCTCTGATAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                             GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602786336F1 NCI_CGAP_SG2 mRNA sequence.
BG867815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG867815.1 GI:14218355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAATTGGTGCCC 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840 AATTGGTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           house mouse.
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG867815
                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                                                                                                           485
                                                                                                                                                                                                                                                                                                                                                                                                                                                             545
                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
BG867815
                                                                                                                                                                                                                                                                                                                      셤
                                               g
                                                                                   ð
                                                                                                                 g
                                                                                                                                                      à
                                                                                                                                                                                     셤
                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                        임
                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                  m mRNA linear EST 02-MAY-2002
Mus musculus cDNA clone
                                                                 CAAGCAGGGCTTGTTTTGATACCAGCTGTAATTGCTGCAACTGGCCATGAACCTAATGC 1431
 GCAGATGACAGAAATGCTTTTTGGCAGTGCATCAATGGAATCACATACCAGCAGCATTGT 1371
                                 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dipublished (1995)
Contact: Robert Strausberg, Ph.D.
Email: ogapbs-remail.nih.gov
Email: ogapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CONA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llni.gov
Plate: LLAM13305 | row: g column: 11
High quality sequence stop: 724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/db_xref="taxon:10090"
/dclone="ImAGE:6051490"
/clone="ImAGE:6051490"
/lab_host="DH10B (T1-resistant)"
/lab_host="DH10B (T1-resistant)"
/note="Organ: stomach; Vector: pCMV-SPORT6; Site_1: Sal1; Site_2: Not!; cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.77 kb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."

2 22 c 205 g 225 t 2 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus

Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi,
Eukaryota, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.

1 (Bases 1 to 872)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ATGCCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 829.4; DB 14;
Pred. No. 1.8e-244;
0; Mismatches 7;
                                                                                                                                                                                                  BQ231064
BQ2BCOURT_7578230 NCI_CGAP_Stl M
IMAGE:6051490 5', MRNA sequence.
BQ231064
                                                                                                                                                                                                                                                                                                                                                                                           BQ231064.1 GI:20412464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tch 54.4%; sl Similarity 99.1%; 844; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .872
                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse.
                                                                 1372
                               799
                                                                                                                                  1432
                                                                                                                                                                                                     1492
1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                        RESULT 7
                                                                                                                                                                                                                                                                                                          BQ231064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
```

g ð 셤 ò

õ

Sun

```
1. .837
/organism="Mus musculus"
/organism="Twbk"
/db_xxef="taxon:10090"
/clone="IwAGE:4913800"
/clone="IwAGE:4913800"
/clone=lib="Mori_CGAP_2862"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Site_1:
Not1; Site_2: Sali; Cloned unidirectionally. Primer: Oligo
dT. Average insert size 1.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
12 a 211 c 197 g 217 t
                                                                                                                             bp mRNA linear EST 29-MAY-2001 musculus cDNA clone IMAGE:4913800 5',
 AAGAACAATGGAGCCCCAGCTGAAGCTCATTGTTGGATTCCCAGAGTTTGGACACACCC 780
                                                                                                                                                                                                                                                Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
R column: 17
High quality sequence stop: 836.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 TTCAAGCCTGATGACATTAACCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGTTACTCTCTATAAAGCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCAAGCCTGATGACATTAACCCCTGCTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                   bST.

Mus musculus

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostor

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; I

(bases 1 to 837)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 52.6%; Score 801.4; DB 12; Best Local Similarity 97.5%; Pred. No. 7.8e-236; Matches 814; Conservative 0; Mismatches 21;
                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
                                                                                                                                837 Mus 1
                                                                                                                                              NCI_CGAP_SG2
                                                                                                                                                                                       GI:14219281
                                                                                                                                         602787570F1 NCI
mRNA sequence.
BG868741
                                                                                                                                                                                       BG868741.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
  721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                 RESULT 9
BG868741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                            ò
                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                  /organism="Mus musculus"
/db_xref="typB/N"
/db_xref="typB/N"
/db_xref="typB/N"
/clone="ImAGE:4912544"
/clone=lib="NCI_CGAP_SG2"
/lab_host="DH10B (IT phage-resistant)"
/lab_host="DH10B (IT phage-resistant)"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Site_1:
Not1; Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
zll c 1988 g 220 t
                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                   210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  810
                                                                                                                                                                                                                                                                                                                                                                                           150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                121 TGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACCATAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTACTCACCTGATCTATGCCTTTGCTGGGATGCAGAACAATGAGATCACCACATAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAATGATGTTACTCTATAAAGCTTTCAATGACTTGAAAAAACAGGAACAGCAAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCACTTCTCAGAACCGCCAGACCTTCATTACCTCAGTCATCAAATTTCTGCGTCAGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATATGACCTCCATGGCTCCTGGGAGGCCTACACTGGGGAGAATAGTCCTCTTTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCAGAGTATGGACACACC
                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                       Score 823.6; DB 12; Length 838;
Pred. No. 1.1e-242;
0; Mismatches 9; Indels 0;
  I.M.A.G.E. Consortium/LLNL
found through the I.M.A.G.E. Consorti
http://image.llnl.gov
Plate: LLAM10816 row: g column: 09
High quality sequence stop: 824.
Location/Qualifiers
                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 98.9%;
Matches 829; Conservative
                                                                       1. .838
                                                                                                                                                                                                                                209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                   31
                                                                                                                                                                                                                                                                                                                                                                                          91
                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 751
                                                                                                                                                                                                                                COUNT
                                                        FEATURES
                                                                                                                                                                                                                              BASE CC
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

ö

Gaps

ö 837;

9 62 120

122 180 182 240

300 302

Q

à

à g g

à g ò 셤 ö g

ò

9 9

Gaps

; ;

360

360 420

300

540

540 900 900 099 999 720

830

480 480

엄

```
NotI; Site_2: Sall; Cloned unidirectionally. Primer: Oligo dar. Average insert size 1.3 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library."

218 c 201 g 220 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               836 bp mRNA linear EST 29-MAY-2001
Mus musculus cDNA clone IMAGE:4921203 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CICAAIGIGG-AITAIGICAIGAACIAI-IGGAAGAACAAIGGAGCCCCAGCIGAGAAGC 778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ATGCCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGGTCT
                                                                                                                                                 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGGAGC
                                                                                                                                                                                                    121 TICAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTAIGCCTTTGCTGGG
                                                                                                                                                                                                                                                     TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                            TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACCCAGGCTCACGTGGGAGCCCTCCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                855;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCATTGTTGGATTCCCAGAGTATGGACACCCTTCATCCTGAGAAACCCC
                                                                                Length
                                                                                                          Indels
                                                                               Score 801.2; DB 12;
Pred. No. 9.2e-236;
0; Mismatches 3;
                                                                                                         ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG869655
602789716F1 NCI_CGAP_SG2
mRNA sequence.
BG869655
                                                                               52.5%;
99.4%;
                                                                               Query Match 52.5
Best Local Similarity 99.4
Matches 825; Conservative
                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
BG869655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                           a
                                                                                                                                                                                                           g
                                                                                                                                  ò
                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                    윱
                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                 . 원
                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG872136 855 bp mRNA linear EST 29-MAY-2001 602792974F1 NCI_CGAP_SG2 Mus musculus cDNA clone IMAGE:4924003 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_ih="IMAGE:4924003"
/clone_ih="NCI_CGAP_SG2"
/lab_host="DH10B (Tl phage-resistant)"
/note="organ: salivary gland; Vector: pcMV-SPORT6; Site_l:
420
                                                                                                      TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACATCTTTCACTGTCCTGGTGAAG 480
                                                                                                                                                            540
                                                                                                                                                                                     542
                                                                                                                                                                                                               9
                                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                 099
                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                     CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus subtractor, Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 85)
1 (bases 1 to 85)
1 (http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                   TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                      can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
Email: cgapbs r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAM10846 [row: d column: 20
High quality sequence stop: 836.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence.
BG872136
BG872136.1 GI:14222676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                           303
                                                                             363
                                                                                                         421
                                                                                                                                 423
                                                                                                                                                                                                             541
                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                             723
                                                                                                                                                                                                                                                                                                                                                                                                                                                783
                                                     361
                                                                                                                                                           181
                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                          603
                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
BG872136
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
```

```
/clone_lib="NCI_CGAP_SG2"
/clone_lib="NCI_CGAP_SG2"
/lab_host="DH10B (T1 phage-resistant)"
/note="Corgan: salivary gland; Vector: pCMV-SPORT6; Site_l:
NotI; Site_2: Sali; Cloned unidirectionally. Primer: Oligo
dT. Average insert size 1.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp mRNA linear EST 29-MAY-2001 musculus cDNA clone IMAGE:4921890 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contract: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MG.C. clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI0840 row: 1 column: 19
High quality sequence stop: 845.
High quality sequence stop: 845.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 880)
NIH-MGC http://mgc.ncl.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCC
                                                                         CTCAATGTGGATTATGTCATGAACTATTGGAAGAACAATGGAGCCCCAGCTGAGAAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                   4 GCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCTGCC
TACACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTAC
                                                                                                                                                                                                                                                                                                                        TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           781 ATTGTTGGATTCCCAGAGTATGGACACACCTTCATCCTGAGAAACCCCTCT 831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       880;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 794.6; DB 12;
Pred. No. 1e-233;
0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        231 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"/strain="FVB/N"/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     602790678F1 NCI_CGAP_SG2 Mus
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG871468.1 GI:14222008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Technologies.
220 c 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 52.1%;
Best Local Similarity 97.3%;
Matches 851; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                 541
                            481
                                                                                 541
                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
BG871468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                              δ
                                                                                                                           g
                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                 å
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="INAGE:4921203"
/clone=lb="NACE:4921203"
/clone=lb="NACE:GAP_SG2"
/lab_host="DH10B (Tr phage-resistant)"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Site_1:
Not1; Site_2: Sal1; Cloned unidirectionally. Primer: Oligo
dT. Average insert size 1.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
207 c 196 g 220 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101 TITGGAACTGCTCCTITCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 ATGCAGAACAATGAGATCACCACATAGAATGGAATGTTACTCTCTAAAGCTTTC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 AATGACTTGAAAAACAGGAAACTGAAAACCTGCTCCTGGCAATTGGAGGCTGGAAC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361 ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGCAGAACAATGAGATCACCACCATAGAATGGAATGATGATTACTCTCTATAAAGCTTTC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC 300
                                                                      Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mamalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 836)
NIH-MGC http://mgc.nci.nih.gov/.
NIH-MGC http://mgc.nci.nih.gov/.
Ontact: Robert Strausberg, Ph.D.
Contact: Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421 TACCCAGGCTCACGTGGGAGCCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61 GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCCAGGTATCGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can l found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
row: p column: 04
High quality sequence stop: 824.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 12; Length 836;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 796.2; DB 1:
Pred. No. 3.2e-234
0; Mismatches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /strain="FVB/N"
/db_xref="taxon:10090"
BG869655.1 GI:14220195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.2%;
llarity 98.2%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .836
                                                        house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 816; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Source
                                                     SOURCE
ORGANISM
                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
VERSION
```

9 63

ద

ò

임

à

ద

ò

g

à g ð g à 셤

ò

g

ò

염 ò g οζ qq ò g δ g õ a ŏ QQ ö g Q q ò g ò g

```
1..894
/organism="Mus musculus"
/strain="rWbws"
/strain="rWbws"
/db_xxef='taxon:10090"
/clone="IMAGE:4920918"
/clone=llb="MCI_CGAP_2G2"
/clone=llb="MCI_CGAP_2G2"
/note="Organ: salivary gland; Vector: pCMV-SPORT6; Site_1: Noti: Site_2: Sali; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.3 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                           9
         Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
    Tissue Procurement: Jeffrey E. Green, M.D.
    cDNA Library Preparation: Life Technologies, Inc.
    CDNA Library Preparation: Life Technologies, Inc.
    CDNA Library Preparation: Life Technologies, Inc.
    CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
    DNA Sequencing by: Incyte Genomics, Inc.
    Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
    http://mage.llnl.gov
    Plate: LLAM10838 row: d column: 07
    High quality sequence stop: 805.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           þe
                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTACAATCTGATATGCTATTTCACCAACTGGGCCCCAGTATCGGCCAGGTCTGGGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAAGCCTGATGACATTAACCCCTGCCTGTGTACTCACCTGATCTATGCCTTTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGACTGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ATGGCCAAGCTACTTCTCGTCACAGGTCTGGCTCTTCTGCTGAATGCTCAGCTGGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITGGAACTGCTCCTITCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACCCAGGCTCACGTGGGAGCCCTCCTCAGGACAAGCATCTCTTCACTGTCCTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAATGCGTGAAGCTTTTGAGCAGGAGGCTATTGAGAGCAACAGGCCCAGACTGATGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTAAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGC
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                             894
                                                                                                                                                                                                                                                                                                                                                             DB 12;
                                                                                                                                                                                                                                                                                                                                                                                      27;
                                                                                                                                                                                                                                                                                                                                                           Score 789.8; DB 12
Pred. No. 3.2e-232;
0; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                           Query Match 51.8%;
Best Local Similarity 96.5%;
Matches 850; Conservative (
Unpublished
                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
JOURNAL
           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                  ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       894 bp mRNA linear EST 29-MAY-2001
Mus musculus cDNA clone IMAGE:4920918 5',
                                                              AAGCCTGATGACATTAACCCCTGCTGTACTCACCTGATCTATGCCTTTGCTGGGATG 183
                                                                                                                                                                        303
                                                                                                                                                                                                  300
                                                                                                                                                                                                                             363
                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                               TCAGTCATCAAATTTCTGCGTCAGTATGGGTTTGATGGACTGGACCTGGAACTGGGAATAC 423
                                                                                                                                                                                                                                                                                                                                                                                       543
                                                                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGGGGAGAATAGTCCTCTTTACAAATACCCTACTGAGACTGGTAGCAATGCCTACCTC 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGIGGATTAIGICAIGAACTATIGGAAGAACAAIGGAGCCCCAGCIGAGAAGCICAIT 783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTGGATTCCCAGAGTAT - - GGACACACCTTCATCCTGAGAAACCCCTCTGATAATGGAA 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  house mouse.

Mus musculus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 894)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                      AAGTACCTGGATTTCATCCATGTCATGACATATGACCTCCATGGCTCCTGGGAGGGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAACAATGAGATCACCACCATAGAATGGAATGTTACTCTCTATAAAGCTTTCAAT
                                                                                                                                                                       GACTTGAAAAACAGGAACAGCAAACTGAAAACCCTCCTGGCAATTGGAGGCTGGAACTTT
                                                                                                                                                                                                                             GGAACTGCTCCTTTCACTACCATGGTTTCCACTTCTCAGAACCGCCAGACCTTCATTACC
                                                                                                                                                                                                                                                                                             GCTGCTGTAGCTGGGATTTCCAACATCCAGGCTGGCTATGAGATCCCTGAACTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTGGTGCCCCTACCTCTGGTGATGGCCCTGCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TIGGIGCCCCTAACICTGGTGATGGGCCTGTGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG869958
602789826F1 NCI_CGAP_SG2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG869958.1 GI:14220498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
BG869958
                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                              181
           64
                                                                                                                                                                       244
                                                                                                                                                                                                 241
                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                              364
                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                  61
                                                                                                                   184
                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                 424
                                                                                                                                                                                                                                                                                                                                                                                    484
                                                                                                                                                                                                                                                                                                                                                                                                                                         544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
BG869958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
```

qq ò

ò ద

ACTACCTGGATTTCATCATGACATATCACCTACTGGGGGGGG	666 TCTAACTGGG-GACANTACTCCTCTATACAACTACACCTCCAACGGGGGGGGGG
--	--

```
/clone_"IMAGE:91141"
/clone_"IMAGE:911411"
/clone_lib="NCI_CGAP_SG2"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: salivary gland; Vector: pCNV-SPORT6; Site_1:
Not!; Site_2: Sali; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.3 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGAGAGCAACAGGCCCAGACTGATGGTTACTGCTGCTGGTGGTGGGATTTCCAACAT 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATATGACCTCCATGGCTCCTGGGAGGGCTACACTGGGGAGAATAGTCCTCTTTACAAATA 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAACAATGGAGCCCCAGCTGAGAAGCTCATTGTTGGATTCCCCAGAGTATGGACACCTT 812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 ATATGACCTCCATGGCTCCTGGGAGGCTACACTGGGGAGAATAGTCCTCTTTACAAATA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCCTGAGAAACCCCTCTGATAATGGAATTGGTGCCCCTACCTCTGGTGATGGCCCTGC 872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCGCCTATACCAGACAGGCTGGGTTCTGGGCCTACTATGAGATTTGCACCTTTCTGAG 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGTGGAGCCACTGAGGTCT-GGGATGCCTCCCAAGAAGTGCCCTATGCCTATAAGGCCA 991
                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                               273 AACCCICCIGGCAAITGGAGGCIGGAACTITGGAACTGCICCTITCACTACCAIGGIIIC
                                                                                                                                                                                                                                                                                                                                                                                                            1 AACCCTCCTGGCAATTGGAGGCTGGAACTTTGGAACTGCTCCTTTCACTACCATGGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                           CACTICICAGAACCGCCAGACCTICATIACCICAGICAICAAATITCIGCGICAGIAIGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTTGATGGACTGGACTGGGAATACCCAGGCTCACGTGGGAGCCCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGCATCTCTTCACTGTCCTGGTGAAGGAAATGCGTGAAGCTTTTGAGCAGGAGGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGGCTGGCTATGAGATCCCTGAACTTTCTAAGTACCTGGATTTCATCCATGTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCTACTGAGACTGGTAGCAATGCCTACCTCAATGTGGATTATGTCATGAACTATTGGAA
                                                                                                                                                                                                                                                                                                                                                       Gaps
                             information can
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                                                                                                                                                          Length 809;
                                                                                                                                                                                                                                                                                                                                                     Indels
                                      found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LLAM10813 row: h column: 14
High quality sequence stop: 804.
Location/Qualifiers
1. .809
             DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution
                                                                                                                                                                                                                                                                                                                        Score 788; DB 12;
Pred. No. 1.1e-231;
0; Mismatches 6;
                                                                                                                             /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                             /db_xref-"taxon:10090"
                                                                                                                                                                                                                                                                                                                       51.7%;
99.1%;
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 99.1
Matches 802; Conservative
                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                          333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                    source
                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

Search completed: July 3, 2003, 08:40:36 Job time: 2289.02 secs